Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead

Richard J. Bruckner
Director

November 15, 2010

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

PROJECT NO. R2009-02239-(5)
VESTING TENTATIVE TRACT MAP NO. 071035
CONDITIONAL USE PERMIT NO. 200900026
ENVIRONMENTAL ASSESSMENT NO. 200900027
APPLICANT: AV SOLAR RANCH I, LLC
353 SACRAMENTO STREET, SUITE 2100
SAN FRANCISCO, CA 94111
ANTELOPE VALLEY WEST ZONED DISTRICT
FIFTH SUPERVISORIAL DISTRICT (3-VOTE)

IT IS RECOMMMENDED THAT YOUR BOARD AFTER THE PUBLIC HEARING:

1. Certify the Environmental Impact Report ("EIR") including: Draft EIR; Final EIR with additional Section 6.0, Late Responses to Comments; Mitigated Monitoring Reporting Program ("MMRP"); and CEQA Findings of Fact ("CEQA Findings"), included for Project No. R2009-02239-(5).

2. Indicate the Board's intent to approve Project No. R2009-02239-(5) including Vesting Tentative Tract Map No. 071035 and Conditional Use Permit No. 200900026.

3. Instruct County Counsel to prepare the necessary Findings and Conditions to affirm the Planning Commission's approval of Project No. R2009-02239-(5) including Vesting Tentative Tract Map No. 071035 and Conditional Use Permit No. 200900026.

JUSTIFICATION OF RECOMMENDED ACTION

After conducting a public hearing in June 30, 2010 and September 15, 2010, on September 15, 2010 the Regional Planning Commission of Los Angeles County ("Planning Commission") approved Project No. R2009-02239-(5) including Vesting Tentative Tract Map No. 071035 and Conditional Use Permit No. 200900026, and certified the associated Environmental Impact Report ("EIR"), 4-0 with one Commissioner absent. The Project consists of a request for a Vesting Tentative Tract Map for a reversion to acreage from 147 lots to one lot on 790 acres and a Conditional Use Permit for the construction, operation and maintenance of a 230 megawatt solar photovoltaic electricity power generation facility on 2,093 acres and 2.25 miles of 230 Kilovolt electricity transmission lines within unincorporated Los Angeles County. The EIR also analyzed 2.0 miles of said transmission lines within Kern County.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The Planning Commission has found that the Project, to develop a photovoltaic solar electricity generation facility, is consistent with the applicable Los Angeles Countywide General Plan and Antelope Valley Area Plan and policies. The Project meets the necessary findings for a Vesting Tentative Tract Map reversion to acreage and a Conditional Use Permit pursuant to the Subdivision Map Act and applicable County Zoning Code provisions.

Subsequent to the Commission's approval of the Project, Northrop Grumman Corporation ("Appellant") appealed the Project to the Board citing inadequacy of the EIR, Vesting Tentative Tract Map, and Conditional Use Permit approvals. Additional late comments were received from Appellant and three other parties. Staff has included voluntary responses to late comments received after close of the duly noticed Draft EIR public comment period. The following information is included to address the late comments.

Final EIR Section 6.0, Responses to Late Comments

In addition to late comments received from Appellant, three additional late comments were received and responses provided by planning staff. Responses are included in the November 2010 Final EIR Section 6.0, Responses to Late Comments. No "significant new information" requiring recirculation of the EIR was received.

Exponent, Inc. Report

One of the comments made by Appellant claims potential negative effects on the operation of a test range at the Tejon Radar Test Facility ("Test Range") operated by Appellant. The Test Range is located approximately 10 miles northwest of the proposed AV Solar Ranch One ("AVSR1") facility. A report written by Exponent, Inc. summarizes a scientific analysis of how the proposed solar facility would likely interface with operation of the Test Range. The report concludes that construction and operation of AVSR1 would not have a significant effect on Appellant's ability to operate the subject Test Range.

CEQA Findings of Fact

Included are updated CEQA Findings of Fact reflecting the additional information received.

Kern County Related Project

On November 9, 2010, the Kern County Board of Supervisors voted 5-0 to certify the Rosamond Solar Project Environmental Impact Report and approve the photovoltaic electricity generation facility. This related project is in close proximity and to the north of the AVSR1 site and of a similar distance from Appellant's Test Range.

ENVIRONMENTAL DOCUMENTATION

The EIR certified on September 15, 2010 provides adequate environmental analysis for the Project as approved by the Planning Commission. The August 2010 FEIR and the additional responses to late comments addressed in the November 2010 Final EIR Section 6.0, Responses to Late Comments clarify or amplify information in the Draft EIR and issues raised by Appellant. The additional information does not reveal that the Project would cause significant new impacts not previously identified and analyzed in the Draft EIR, therefore, recirculation of the EIR is not required.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Action on the proposed Vesting Tentative Tract Map and Conditional Use Permit is not anticipated to have a negative impact on current services.

Respectfully Submitted,

Richard J. Bruckner
Director

RJB:SZD:KKS

Attachments: Responses to Late Comments and Exponent, Inc. Report
Revised CEQA Findings of Fact and MMRP

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisors
Assessor
Director, Department of Public Works

FINAL
ENVIRONMENTAL IMPACT REPORT
SECTION 6.0
RESPONSES TO LATE COMMENTS

AV Solar Ranch One Project

COUNTY OF LOS ANGELES
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, California 90012

County Project No. R2009-02239
Vesting Tentative Tract Map No. TR071035
Conditional Use Permit No. RCUPT200900026
Environmental Review No. RENVT200900027
SCH No. 2009041145

NOVEMBER 2010

TABLE OF CONTENTS

Section **Page**

6.0 RESPONSES TO LATE COMMENTS 6.1-1

6.1 INTRODUCTION 6.1-1
6.2 WRITTEN RESPONSES TO LATE COMMENTS 6.2-1

6.2.1 California Department of Transportation (CT-1) 6.2-1
6.2.2 Adams Broadwell Joseph and Cardozo (EK-1) 6.2-1
6.2.3 Northrop Grumman Corporation (NG-1) 6.2-4
6.2.4 Melody Mokres (MM-1) 6.2-31

6.3 LATE COMMENT LETTERS 6.3-1

List of Tables

Table 6-1 Summary of Late Comments Received on the Final EIR (August 2010) for the AV Solar Ranch One Project 6.1-2

List of Attachments

Attachment A Exponent Report

SECTION 6.0
RESPONSES TO LATE COMMENTS

6.1 INTRODUCTION

The Draft Environmental Impact Report (Draft EIR) for the AV Solar Ranch One Project (Project) was circulated on June 16, 2010 for a formal 45-day public comment period ending on July 30, 2010. During that time, the County of Los Angeles Department of Regional Planning received a total of 14 individual comment letters on the Draft EIR as summarized in Table 4-1 of the Final EIR dated August 2010.

The County of Los Angeles Regional Planning Commission (RPC) held a public hearing on the Draft EIR on June 30, 2010. Public comments were received at the RPC hearing. Refer to Section 3.0 of the Final EIR (August 2010) for the June 30, 2010 RPC Hearing minutes and responses to oral comments received at the hearing.

The Final EIR (August 2010) addressed all written and oral comments received on the Draft EIR. A second RPC Hearing was held on September 15, 2010 at which time the Final EIR (August 2010) was certified by the RPC.

Following the close of the noticed Draft EIR public comment period (July 30, 2010) and after the August 2010 Final EIR was issued, four late comment letters were transmitted to the Los Angeles County Department of Regional Planning (LACDRP), as summarized in Table 6-1. These letters included a letter from the California Department of Transportation (Caltrans) dated September 14, 2010; a letter from Adams Broadwell Joseph & Cardozo, on behalf of the California Unions for Reliable Energy (CURE) dated September 14, 2010; and an email from Ms. Melody Mokres dated September 14, 2010. Additionally, on September 24, 2010, Northrop Grumman Corporation (NG) filed an Appeal to the RPC's certification of the Final EIR (August 2010) as well as the RPC's approval of Conditional Use Permit (CUP) No. 200900026 and Vesting Tentative Tract Map (VTTM) No. TR071035 for the Project. For purposes of this Final EIR Section 6.0, Responses to Late Comments, NG's Appeal and Rider is considered as a "late" comment letter along with the aforementioned three other late comment letters.

The Final EIR document (August 2010) consisted of the following five sections: 1.0 – Introduction; 2.0 – Revisions to the Draft EIR; 3.0 – Responses to Regional Planning Commission Hearing Comments; 4.0 – Comments and Responses to Written Comments; and 5.0 – Mitigation Monitoring and Reporting Program. This Final EIR Section 6.0 (November 2010), Responses to Late Comments, provides written responses to the late comment letters. The Project Final EIR consists of the following documents: 1) June 2010 Draft EIR; 2) June

2010 Technical Appendices to the Draft EIR; 3) August 2010 Final EIR; and 4) November 2010 Final EIR Section 6.0, Responses to Late Comments.

The late comment letter designations are presented in Table 6-1 and on each letter. The individual comments for each late comment letter are delineated and numbered in the letter margins for reference purposes. Written responses to each late comment letter are presented in Section 6.2, and the late comment letters are presented in Section 6.3.

TABLE 6-1
SUMMARY OF LATE COMMENTS RECEIVED ON THE FINAL EIR (AUGUST 2010) FOR THE AV SOLAR RANCH ONE PROJECT

Date	Commenter/Affiliation	Late Comment Item ID	Number of Late Comments Identified
State Agencies			
9/14/10	Carl Shiigi/California Department of Transportation	CT-1	1
Organizations			
9/14/10	Elizabeth Klebaner/Adams Broadwell Joseph & Cardozo	EK-1	6
9/24/10	Northrop Grumman Corporation	NG-1	34
Individuals			
9/14/10	Melody Mokres	MM-1	3

6.2 WRITTEN RESPONSES TO LATE COMMENTS

6.2.1 California Department of Transportation (CT-1)

Response CT-1-1:

This late comment letter was received by LACDRP on September 16, 2010, one day after the Los Angeles County Regional Planning Commission hearing was held on the Final EIR (August 2010) for the AV Solar Ranch One Project. The County acknowledges Caltrans previous studies and tentative, future plans for widening State Route (SR) 138. Refer to Response SA-2-2 in Section 4.2 (State Agencies) of the Final EIR (August 2010), which addresses the County's requirements for dedication of land by the Applicant on both sides of SR-138 to accommodate Caltrans' potential future widening of SR-138. The proposed Project design and County of Los Angeles required Project setbacks from SR-138 (generally 100 feet on each side of SR-138 centerline for a total width of 200 feet to accommodate potential future road widening) take Caltrans' possible future highway widening plans into consideration. The County and the Applicant understand that Caltrans' possible future widening of SR-138 will involve a total roadway/shoulder width of up to 164 feet (maximum) and could require minor Project modifications to accommodate Caltrans needs once they are defined with more certainty regarding the selected cross section width and location.

6.2.2 Adams Broadwell Joseph and Cardozo (EK-1)

Response EK-1-1:

This comment states that Adams Broadwell Joseph & Cardozo's comments are on behalf of CURE and that they urge the RPC to not approve the Final EIR and to direct the LACDRP to revise and recirculate the Draft EIR. This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Final EIR (August 2010). Therefore, a response is not required pursuant to CEQA. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

Response EK-1-2:

The County disagrees with this comment and the contention that the Final EIR (August 2010) does not adequately respond to CURE's comments on the Draft EIR. Refer to the Written Responses to Comment Letter ORG-3 in the Final EIR (August 2010). This comment does not raise any new comments or specific points regarding the adequacy of the Final EIR (August 2010). The County also disagrees that significant new information was added to the Final EIR (August 2010) requiring recirculation of the EIR. Refer to Response EK-1-3 for

more information. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

Response EK-1-3:

This comment states that the Final EIR includes "significant new information" within the meaning of California Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5, and that the County was therefore required to revise and recirculate the Draft EIR. The Final EIR does not present "significant new information," thus there is no justification or need to recirculate the Draft EIR.

CEQA Guidelines Section 15088.5 requires recirculation of an EIR prior to certification of the Final EIR when "significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review." "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect." (CEQA Guidelines § 15088.5.) CEQA Guidelines Section 15088.5 (a) contains an illustrative list of examples of "significant new information" requiring recirculation:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

In addition, CEQA Guidelines Section 15088.5(b) provides that "recirculation is not required where the new information added to the EIR merely clarifies and amplifies or makes insignificant modifications in an adequate EIR."

Mitigation Measure 5.7-13 (Pre-construction Desert Tortoise Surveys) was added to the Draft EIR based on a recommendation from the U.S. Fish and Wildlife Service as a precautionary measure to avoid unlikely Project impacts to Desert tortoise as discussed in Responses ORG-3-62 and ORG-3B-7 in Section 4.4 of the Final EIR (August 2010). The Final EIR did not identify a new significant impact to the Desert Tortoise requiring recirculation. The Final EIR (August 2010) does not present new, unsupported analyses regarding baseline biological and air quality conditions at the Project site as contended in this comment. As discussed in

Response ORG-3-2 (and other Responses referenced therein) in the Final EIR (August 2010), the Draft EIR includes sufficient baseline information and analysis regarding the Project's potentially significant impacts to biological resources, air quality, water supply et al. Moreover, there is no significant new information requiring recirculation (See CEQA Guidelines Section 15088.5).

As discussed in Final EIR (August 2010) Response ORG-3-9, a WSA is not required for the Project and, accordingly, a WSA was neither prepared nor included in the Draft EIR. This is not substantial new information and recirculation is not required.

Response EK-1-4:

The County disagrees with this comment and the contention that the Draft EIR was inadequate and conclusory in nature. The County also disagrees with the contentions that the Final EIR (August 2010) does not present a stable and finite Project description or adequately analyze impacts to air quality, biological resources, visual resources, and water quality, or propose adequate mitigation. This comment does not state specific examples to support these general contentions which were all previously addressed in Written Responses to Comment Letter ORG-3 in the Final EIR (August 2010); therefore, specific responses are not required pursuant to CEQA. Refer to the following relevant responses to comments in the Final EIR (August 2010):

- Project Description (see Responses ORG-3-8 and ORG-3-19 through ORG-3-28)
- Air Quality (see Responses ORG-3-8, -14, -16, -19, -25, -27, -31, -32, -33,-55, -58, and -59)
- Biological Resources (see Responses ORG-3-12, -16, -29, -31, -34 through -39, -61, -63, and -76; and ORG-3B-3 through -10, -13, -17, -18, -19, -22 and -25)
- Visual (see Responses ORG-3-50, -51, -52, and -53)
- Water (see Responses ORG-3-9, -13, -15, -18, -40 through -48, -65, -66, -67, -69, -70, -71, and -78; and ORG-3A-6 and -10)

The comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

Response EK-1-5:

As discussed in Final EIR (August 2010) Response ORG-3-9, a WSA is not required for the Project and, accordingly, a WSA was neither prepared nor included in the Draft EIR. The Draft EIR presents a detailed analysis of groundwater resources and potential Project effects

in Section 5.14, Appendix J, and Appendix J2. The County disagrees with this comment and the contention that the EIR is deficient or invalid.

Response EK-1-6:

As discussed in Response EK-1-3, the County disagrees that the EIR must be recirculated for public review and comment in accordance with CEQA.

In accordance with Section 15121(a) of the CEQA Guidelines, the EIR is an informational document which informs public agency decisionmakers and the public generally of: 1) the significant environmental effect of the Project; 2) identify possible ways to minimize the significant effects; and 3) describe reasonable alternatives to the Project. The EIR was prepared in accordance with Section 15151 of the CEQA Guidelines, which states that:

> An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

The EIR includes sufficient information and analysis regarding the Project description and the Project's potentially significant impacts to air quality, biological resources, visual resources, water supply, and other relevant resource topics. In addition, the EIR presents adequate mitigation.

6.2.3 Northrop Grumman Corporation (NG-1)

Response NG-1-1:

This comment is Northrop Grumman Corporation's (NG) Appeal (dated September 24, 2010) to the Los Angeles County Regional Planning Commission's (RPC) September 15, 2010 decision on the AV Solar Ranch One Project. The Appeal is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration. Written responses to the Appeal Rider are presented beginning with Response NG-1-2.

Response NG-1-2:

This comment is the introduction to the Appeal "Rider" and states that the Appeal applies to the RPC's certification of the Final EIR and approval of the Conditional Use Permit and the Vesting Tentative Tract Map for the Project. This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

Response NG-1-3:

The County disagrees with the general contention that the RPC's certification of the Final EIR was unlawful. Please refer to Responses NG-1-4 through NG-1-27, which address and refute the specific contentions, where applicable, in the NG Appeal.

Response NG-1-4:

CEQA Guidelines Section 15143 states that the "EIR shall focus on the significant effects on the environment" and provides that the "[e]ffects dismissed in an Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR." Instead, agencies may limit discussion to a brief explanation as to why some effects are not potentially significant and are therefore not discussed in detail in the EIR (CEQA § 21002.1 (e)). This requirement is satisfied either by "a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant" or by attaching a copy of the Initial Study (CEQA Guidelines §§ 15128, 15143). Contrary to the general, non-specific, and unsubstantiated contentions in this comment, the Draft EIR did not unlawfully omit environmental effects in the EIR.

In accordance with CEQA Guidelines Section 15063, the County prepared an Initial Study dated April 13, 2009 that identified the issue areas requiring analysis in the EIR (see Draft EIR Appendix A.1). Based on the analysis and conclusions of the Initial Study, the Draft EIR analyzed the following environmental issues:

- Geotechnical Hazards
- Flood Hazards
- Fire Hazards
- Water Quality
- Air Quality
- Biological Resources

- Cultural and Paleontological Resources
- Visual Qualities
- Traffic and Access
- Fire Protection Services
- Sheriff Services
- Utility Services
- Environmental Safety
- Land Use
- Global Climate Change

While the Initial Study did not identify potentially significant impacts to Agricultural Resources and Noise, these two resource disciplines were also included in the Draft EIR for further assessment of potential impacts (see Draft EIR Section 5.9 [Agricultural Resources] and Draft EIR Section 5.18 [Noise]). Additionally, issues relating to change of character and growth-inducing impacts are discussed in Section 7.0 of the Draft EIR. Draft EIR Section 5.1.2 includes a description addressing each of the environmental issues not addressed in the Draft EIR – mineral resources, sewage disposal, education, and recreation – and indicates the reasons why effects were determined to be clearly insignificant and unlikely to occur. Additionally, the Initial Study is included in Appendix A.1 of the Draft EIR.

Response NG-1-5:

This comment contends that the County failed to comply with notice requirements with respect to the preparation and distribution of the Draft EIR and Final EIR without providing any specific points to support this contention. Contrary to the general contention in this comment, the County fully complied with CEQA's notice requirements for preparation and distribution of the Draft EIR and Final EIR. CEQA requires that after deciding that an EIR is required for a project, a Notice of Preparation (NOP) of an EIR must be provided to: 1) the Governor's Office of Planning and Research; 2) Responsible and Trustee Agencies; and 3) Federal Agencies involved in approving or funding the Project (CEQA § 21080.4; CEQA Guidelines § 15082(a)). In addition, CEQA requires a Scoping Meeting for projects "of statewide, regional, or areawide significance." (CEQA § 21083.9(a)(2); CEQA Guidelines § 15082(c)(1).) In compliance with CEQA and the CEQA Guidelines, the County oversaw the preparation and distribution of the Project's NOP. The NOP and the Initial Study were circulated on April 29, 2009 to the State Clearinghouse and other public agencies for the required 30-day review and comment period ending on June 1, 2009. A Scoping Meeting was

held on May 14, 2009 near the Project site in Antelope Acres to facilitate public review and comment on the Project.

CEQA requires that public notice must be given by one of the following methods: 1) publication at least once in a newspaper of general circulation; 2) posting of the notice by the public agency on and off the site where the project is located; or 3) direct mailing to owners and occupants of property contiguous to the parcel or parcels on which the project is located (CEQA § 21092; CEQA Guidelines § 15087 (a)). Notice must also be posted in the Office of the County Clerk for a period of at least 30 days (CEQA § 21092.3; CEQA Guidelines § 15087 (d)). As discussed in Final EIR Section 1.2, the Draft EIR was circulated for a 45-day review period from June 16, 2010 to July 30, 2010. The Notice of Completion and Availability of the Draft EIR ("NOC") was published on June 16, 2010, in *La Opinión* and the *Antelope Valley Press* which are newspapers of general circulation. On June 15, 2010, the NOC was posted at the Project site with a total of eleven notices posted. The NOC was also mailed by first-class mail on June 14, 2010 to all property owners within a 1,000-foot radius of the Project site and other interested parties. The NOC was also posted at the County Clerk's Office on June 16, 2010. Copies of the Draft EIR were made available to the public at the offices of the Department of Regional Planning, online at the Department of Regional Planning website, and at several public libraries in the Antelope Valley.

The County also satisfied and surpassed CEQA requirements for the Final EIR. CEQA Section 21092.5 provides that "[a]t least 10 days prior to certifying an environmental impact report, the lead agency shall provide a written proposed response to a public agency on comments made by that agency." In addition, CEQA provides that a lead agency may, but is not required to, provide an opportunity for the public to review a final EIR (CEQA Guidelines § 15089(b)).

On August 31, 2010, the County mailed copies of the Final EIR, including responses to comments, to public agencies and interested parties that commented on the Draft EIR. In addition, the County notified other interested parties of the preparation of the Final EIR. Finally, copies of the Final EIR were made available to the public at the office of the Department of Regional Planning, online at the Department of Regional Planning website, and at the Quartz Hill County Library, the Lancaster County Library, the Littlerock Library, the Lake Los Angeles Library, and the Antelope Valley Bookmobile.

Response NG-1-6:

This comment alleges that the project description is inadequate without offering any specific points in support of the claim. CEQA Guidelines Section 15124 provides that a project description must contain information about the project's location and boundaries, objectives, a general description of its technical, economic, and environmental characteristics, and a brief statement of the intended uses of the EIR. Contrary to the general contention in this

comment, Draft EIR Section 4.0 (Project Description) clearly identifies the Project's location and boundaries (Draft EIR Section 4.3), purpose and objectives (Draft EIR Section 4.1.2), a description of the Project's components and characteristics including the technical, economic, and environmental characteristics (Draft EIR Section 4.4); and, a statement describing the intended use of the EIR (Draft EIR Section 4.5). The Draft EIR Project Description presents the key differences in the design and physical characteristics of each option under consideration and the environmental analyses presented in Draft EIR Section 5.0 (Environmental Impact Analysis) considered the worst-case attributes of the Project options respective to each environmental analysis.

Response NG-1-7:

This comment contends that both the Draft EIR and Final EIR unlawfully failed to analyze the Project's impact on the operation of radar testing that occurs on Range 1 at the NG Tejon Test Facility. The commenter does not specify any particular environmental impact from the Project on operations at the Tejon Test Facility nor contend that impacts that may occur at the Tejon Test Facility constitute a significant effect upon the environment.

CEQA is clear – economic and social effects that are not related to physical impacts need not be evaluated in an EIR (CEQA Guidelines §15064(e), 15064(f)(6), 15131(a)). An EIR must identify and describe "[a]ll significant effects on the environment of the proposed project." (CEQA § 21100(b)(1)). CEQA defines "significant effect upon the environment" as "a substantial or potentially substantive adverse change in the environment." (CEQA § 21068.) "Environment" is defined as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance." (CEQA § 21060.5.) Further, the impacts analyzed in an EIR must be "related to a physical change." (CEQA Guidelines § 15358(b).) "Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects." (CEQA Guidelines § 15126.2(a).) "A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project." (CEQA Guidelines § 15064(d)(1).) Examples include dust, noise, traffic of heavy equipment, and odors. (*Id.*) "An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project." (CEQA Guidelines § 15064(d)(2).) "An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project." (CEQA Guidelines § 15064(d)(3).) There is no evidence presented by the commenter that impacts to radar testing are environmental impacts, much less significant environmental impacts within the scope of CEQA. A radar testing facility is not "environmental," i.e., it is not a physical condition such as land, air, water, minerals, flora, fauna, noise, or objects of historic or aesthetic significances within the scope of CEQA.

Accordingly, CEQA does not require that either the Draft EIR or the Final EIR analyze the Project's impact on the operations at the Tejon Test Facility.

Even if the impacts to radar operations at the Tejon Test Facility were considered environmental impacts (the County strongly asserts they are not), such impacts are not significant. As discussed in the attached November 2, 2010 report prepared by Exponent, Inc. titled, *Impact of the Antelope Valley Solar Ranch on the Tejon Test Facility,,* Project operation and construction will not have a significant effect on NG's ability to operate the Tejon Test Facility. The Tejon Test Facility is located more than 10 miles to the northwest of the Project site. The Tejon Test Facility has two ranges—Range 1 and Range 2—for measuring radar cross section of test targets. NG has asserted that the Project would elevate background radar returns, sometimes referred to as "clutter," to a level that would unacceptably affect NG's ability to operate Range 1 of the Tejon Test Facility. As described in Attachment A to this November 2010 Final EIR, Exponent conducted a conservative analysis of the Project's potential effect on NG's ability to operate Range 1 of the Tejon Test Facility. Exponent concluded that the Project will not contribute to clutter for numerous values of radar pulse-repetition frequency. Moreover, Exponent concluded that the Project possesses a clutter signature that, for all estimated Range 1 radar parameters, is below the sensitivity of the Tejon Test Facility and is indistinguishable from current ambient noise sources. Exponent further concluded that to the extent that the Project construction and operation could produce incremental clutter, there are well recognized and reasonable means of accounting for this effect that would allow NG to continue normal operation. For example, a properly chosen pulse repetition frequency will render the Project essentially invisible to radar pulses transmitted by the Tejon Test Facility. Accordingly, even if impacts to radar operations at the Tejon Test Facility were considered environmental impacts, the impacts are less than significant.

Additionally, even if the impacts to radar operations at the Tejon Test Facility were environmental impacts, CEQA requires agencies and courts to differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general in determining whether a project will result in a significant impact on the environment (*Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal. App. 4th 720, 734). "[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether demolition of structures will adversely affect particular persons but whether demolition of structures will adversely affect the environment of persons in general." (*Topanga Beach Renters Assn v. Department of General Services* (1976) 58 Cal.App.3d 188, 195.) "Under CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons." (*Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 492–93.) Courts have consistently held that impacts to a single party are not the types of environmental impacts the Lead Agency is required to evaluate in an EIR (*see, e.g., Ass'n for*

Protection of Environmental Values in Ukiah v. City of Ukiah (1991) 2 Cal.App.4th 720; *Banker's Hill City of San Diego* 139 Cal.App.4th 249; *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477; B*owman v. City of Berkeley* (2004) 122 Cal.App.4th 572; *Gabric v. City of Rancho Palos Verdes* (1977) 73 Cal.App.3d 183). Accordingly, since any impacts alleged in this comment are upon the radar facility only and not adverse impacts upon the environment of persons in general, CEQA does not require impacts to the Tejon Test Facility to be evaluated in the EIR.

Moreover, at the time the Draft EIR and Final EIR were prepared, there was no evidence presented by anyone for inclusion in the record which indicated that the Project would impact operations at the Tejon Test Facility. Despite the many opportunities for public participation, NG did not provide any written or oral testimony on the Project. In compliance with the CEQA Guidelines, the County oversaw the preparation and distribution of the Project's NOP. The NOP and the Initial Study were circulated on April 29, 2009 to the State Clearinghouse and other public agencies for the required 30-day review and comment period ending on June 1, 2009. A Scoping Meeting was held on May 14, 2009 in Lancaster to facilitate public review and comment on the Project. In accordance with CEQA, the Draft EIR was circulated for a 45-day public review period beginning on June 16, 2010 and ending on July 30, 2010. The Commission held two properly noticed public hearings: June 30, 2010 and September 15, 2010. Despite all of this public process, no contention was ever made which suggested that operations at the Tejon Test Facility were at issue.

Response NG-1-8:

The County disagrees with the general contention that the EIR was not prepared with a sufficient degree of analysis to permit informed decision making. Since no specific comments regarding the adequacy of the EIR's degree of analysis are provided in this comment, it is not possible to respond to specific points. However, in accordance with CEQA Guidelines Section 15151, the record demonstrates that the EIR was "prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences."

The Draft EIR provides thorough discussions and sufficient analysis for all applicable resource topics, including characterization of baseline environmental conditions, identification of all potentially significant impacts, and specification of appropriate mitigation measures for reducing identified impacts to less than significant levels, for the following resource topics:

- Geotechnical Hazards
- Flood Hazards
- Fire Hazards

- Water Quality
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Agricultural Resources
- Visual Qualities
- Traffic and Access
- Fire Protection Services
- Sheriff Services
- Utility Services
- Environmental Safety
- Land Use
- Global Climate Change
- Noise

See Draft EIR Section 5.0, and refer to Responses NG-1-10 through NG-1-23 for more information about each resource topic.

Response NG-1-9:

As discussed in Response NG-1-8, in accordance with CEQA Guidelines Section 15151, the EIR was "prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences." In accordance with CEQA Guidelines Section 15121(a), the Draft EIR is an informational document which: 1) informs public agency decisionmakers and the public generally of the significant environmental effect of the Project; 2) identifies possible ways to minimize the significant effects; and 3) describe reasonable alternatives to the Project. An EIR need not be "exhaustive," and must be reviewed in light of what is "reasonably feasible" given the available data, time constraints, and relative importance of the issues (CEQA Guidelines § 15151; *Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, 1178). What is "reasonably feasible" is determined "in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project." (CEQA Guidelines § 15204.) The EIR need not anticipate or engage in tit-for-tat rebuttal of every argument advanced by project opponents. (*Laurel Heights Improvement Ass'n v. Regents of the Univ. of Calif.* (1988) 47 Cal.3d 376,

408 [the "proper judicial goal . . . is not to review each item of evidence in the record with such exactitude that the court loses sight of the rule that the evidence must be considered as a whole"].) The EIR need only address substantive environmental issues at the level necessary to foster informed decision making. "The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (CEQA Guidelines § 15151; *see also Karlson v. Camarillo*, (1980) 100 Cal.App.3d 789, 805.)

The Draft EIR provides thorough discussions and sufficient analysis for all applicable resource topics, including characterization of baseline environmental conditions, identification of all potentially significant impacts, and specification of appropriate mitigation measures for reducing identified impacts to less than significant levels, for all resource topics (see Response NG-1-8).

Response NG-1-10:

This comment states that the Draft EIR analysis of air quality impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the air quality baseline and impacts in Section 5.6 (Air Quality) and Appendix D (Air Quality Emission Calculations and Wind Rose Data). The air quality analysis included consultation and coordination with the Antelope Valley Air Quality Management District (AVAQMD) and the Kern County Air Pollution Control District (KCAPCD). The methodology for quantification of air emissions is presented in Draft EIR Section 5.6.3.2. The results of the air quality emissions calculations presented in Section 5.6.3 and Appendix D of the Draft EIR show that AVAQMD and KCAPCD significance thresholds (for criteria pollutants) would not be exceeded during the construction or operational phases of the Project. As discussed in Draft EIR Section 5.6.5 (Air Quality, Mitigation Measures), implementation of the following mitigation measures would reduce all potentially significant air quality impacts to less than significant levels:

- Mitigation Measure (MM) 5.6-1: Ensure AVAQMD Construction Emission Thresholds would be Met
- MM 5.6-2: Develop and Implement Fugitive Dust Emission Control Plan
- MM 5.6-3: Dust Plume Response Requirement
- MM 5.6-4: Off-road Diesel-fueled Equipment Standards
- MM 5.6-5: Limit Vehicle Traffic and Equipment Use
- MM 5.6-6: Heavy Duty Diesel Water Haul Vehicle Equipment Standards
- MM 5.6-7: On-road Vehicles Standards
- MM 5.6-8: Properly Maintain Mechanical Equipment

- MM 5.6-9: Restrict Engine Idling to 5 Minutes
- MM 5.6-10: Off-road Gasoline-fueled Equipment Standards
- MM 5.6-11: Off-road Equipment Operator Worker Protection

In summary, potential impacts to air quality would be less than significant with mitigation and the analysis of Project impacts to air quality presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-11:

This comment states that the Draft EIR analysis of biology impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for biological resources in Section 5.7 (Biological Resources) and Appendix E (Biota Report). Section 5.7 and Appendix E of the Draft EIR include a detailed biological description of the site (2,100-acre solar facility and off-site transmission line) and its surroundings, descriptions of the various field surveys conducted, and discussions of the resources present, including plants, animals, and mapped vegetation communities. Consistent with CEQA Guidelines Section 15126.2(a), the Draft EIR considers and discusses the existing physical conditions of the potentially affected area. Numerous, full-coverage field surveys of the Project site were conducted in 2008, 2009, and 2010 to establish the existing biological conditions for purposes of the Draft EIR, as described in Draft EIR Section 5.7. The identification of potentially impacted sensitive biological resources/species (flora and fauna) and associated field surveys included coordination and consultation with the following pertinent regulatory agencies: California Department of Fish and Game; U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers; and the County of Los Angeles Significant Ecological Areas Technical Advisory Committee. All special-status resources identified during field investigations of the site and off-site transmission line were considered in the impact analysis. As discussed in Draft EIR Section 5.7.3 (Biological Resources, Project Impacts), implementation of the biological resource mitigation measures presented in Draft EIR Section 5.7.5 (Biological Resources, Mitigation Measures) would reduce all identified potentially significant impacts to biological resources to less than significant levels. In summary, potential impacts to biological resources would be less than significant with mitigation and the analysis of Project impacts to biological resources presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-12:

This comment states that the Draft EIR analysis of cultural and paleontological resources impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for cultural and paleontological resources in Section 5.8 (Cultural and Paleontological Resources) and Appendix F (Phase I

Cultural Resources Technical Report). Section 5.8 and Appendix F of the Draft EIR include detailed descriptions of the cultural resources (archaeological and historic resources) and paleontological resources for the site (2,100-acre solar facility and off-site transmission line) and its surroundings, and descriptions of the intensive cultural resource field surveys conducted in 2009 and 2010. Research in support of the cultural and paleontological resources analysis presented in the Draft EIR was conducted at or with the South Central Coastal Information Center (SCCIC) at California State University Fullerton, the Southern San Joaquin Valley Information Center (SSJVIC) at California State University Bakersfield, the Natural History Museum of Los Angeles County (NHMLAC), and the Native American Heritage Commission (NAHC). This assessment included a review of published and unpublished literature. As discussed in Section 5.8.3 (Cultural and Paleontological Resources, Project Impacts) of the Draft EIR, implementation of the cultural and paleontological resource mitigation measures presented in Draft EIR Section 5.8.5 (Cultural and Paleontological Resources, Mitigation Measures) would reduce all potentially significant impacts to cultural and paleontological resources to less than significant levels. In summary, potential impacts to cultural and paleontological resources would be less than significant with mitigation and the analysis of Project impacts to these resources as presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-13:

This comment states that the Draft EIR analysis of impacts on agricultural resources is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for agricultural resources in Section 5.9 (Agricultural Resources). The Draft EIR presents descriptions of the baseline conditions for agricultural resources in Section 5.9.2 (Agricultural Resources, Environmental Setting), including historical and present agricultural conditions for the site (2,100-acre solar facility and off-site transmission line), including Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Williamson Act lands (applicable to Kern County portion of off-site transmission line only). As discussed in Section 5.9.3 (Agricultural Resources, Project Impacts) of the Draft EIR, the potential impacts of the proposed Project on agricultural resources are considered to be less than significant absent mitigation. Implementation of Mitigation Measure 5.9-1 presented in Draft EIR Section 5.9.5 (Agricultural Resources, Mitigation Measures) would be expected to reduce potentially significant impacts to Williamson Act contract lands in Kern County associated with the off-site transmission line to less than significant levels. In summary, the analysis of Project impacts to agricultural resources presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-14:

This comment states that the Draft EIR analysis of impacts to utilities is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for utility services in Section 5.14 (Utility Services) and Appendix J (Groundwater Characteristics at the AV Solar Ranch One Site), including Appendix J.2 (Water Requirements and Groundwater Supply AV Solar Ranch One). Section 5.14 and Appendix J/J.2 of the Draft EIR include detailed descriptions of the utility services for the Project site and vicinity, including water supply, electricity and gas, and solid waste. As discussed in Section 5.14.3 (Utility Services, Project Impacts) of the Draft EIR, the potential impacts of the proposed Project on utility services are considered to be less than significant absent mitigation. In summary, potential impacts to utilities would be less than significant and the analysis of Project impacts to utility services presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-15:

This comment states that the Draft EIR analysis of impacts on visual qualities is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for visual resources in Section 5.10 (Visual Qualities). Section 5.10.2 (Visual Qualities, Environmental Setting) of the Draft EIR includes a detailed description of the environmental setting for the Project solar facility site and off-site transmission line, including a description of existing visual resources and sensitive viewing areas. Section 5.10.3 (Visual Qualities, Project Impacts) of the Draft EIR presents the visual impact assessment methodology and significance criteria, identifies the visual sphere of influence, identifies the key observation points (KOPs) identified and utilized in the impact analysis and visual photosimulations, and assesses Project impacts from sensitive viewing locations. Based on an assessment of the sensitive viewers and locations, as described in Section 5.10.3 of the Draft EIR, KOPs were selected and an evaluation was made as to the degree of visual change from each location as a result of the Project. Five KOPs were selected and analyzed to determine the impacts of the proposed Project on surrounding views. Figures 5.10-1A and 5.10-1B in the Draft EIR illustrate the five KOP locations identified for the Project, which consist of the following:

- KOP 1: Motorist view traveling west along SR-138, which bisects the Project site
- KOP 2: Motorist view traveling north on 170th Street West at intersection of 170th Street West and SR-138 (170th Street West also bisects the Project site)
- KOP 3: Recreational user view from a representative trail located within the AVCPR, looking northwest towards Project

- KOP 4: Recreational user view from easternmost edge (trailhead) of Desert Woodland Park looking northeast towards Project
- KOP 5: View from a representative residence located at 50800 172nd Street looking south-southeast towards Project (approximately 0.5 mile north of the site)

The Draft EIR presents a detailed description of the simulation preparation in Section 5.10.3.4.2, which includes: a description of the equipment used (Fuji GX 617 panoramic camera providing a 2.25-inch-by-6-inch film transparency, Nikon 12-megapixel digital camera with a 35-mm lens image, hand-held GPS unit, and various computer software [terrain model, computer-aided design, rendering software, etc.]); the steps and procedures followed to generate the simulations; and the methodology and purpose of the procedures. Draft EIR Section 5.10.3.4.2 also describes methods employed to produce visual accuracy (for instance, use of a terrain model to align the Project computer model to the photographs, use of computer aided design (CAD) for life-sized modeling, use of global positioning systems [with coordinates depicted on Draft EIR Figure 5.10-1B] to accurately georeference facility equipment locations, color mapping and texturing of all modeled elements to simulate actual facility materials, simulating the lighting conditions at the time the photographs were taken, etc.). In summary, Section 5.10 of the Draft EIR provides adequate documentation on visual baseline conditions, the impact assessment methodology (including photosimulations) and findings. Based on the analysis presented in Section 5.10 of the Draft EIR, no significant impacts to visual quality (i.e., aesthetic resources) were identified. However, the Draft EIR stipulates visual quality related mitigation measures in Section 5.10.5 to ameliorate less than significant construction and operation phase impacts further. Mitigation Measure 5.10-4 implements vegetative screening for a 10-foot-wide strip along both sides of SR-138. As shown on Draft EIR Figures 5.10-4 (Existing View of KOP #1), 5.10-5 (Simulated View of KOP #1), and 5.10-7 (Simulated View of KOP #2), the Project's implementation of the design and enhancement features (i.e., the facility setback from SR-138 (approximately 120 feet from centerline of the roadway to Project fence lines), use of the lower elevation trackers, and vegetated areas along the fence line) would maintain views to the distant mountains, and would result in less than significant effects to the viewshed. While the Project impacts are not considered significant, Mitigation Measure 5.10-3, Building and Equipment Paint, which requires neutral and non-reflective paints and pigments on proposed on-site building and equipment structures, Mitigation Measure 5.10-4, which requires County approval of a landscaping plan for the proposed screening vegetation along SR-138, and Mitigation Measure 5.10-5, requiring the Applicant to maintain additional land on both sides of SR-138 free of trash and debris until the applicable lands are transferred to Caltrans and improved by the County, would further ameliorate less than significant Project operation impacts. In conclusion, potential impacts to visual quality would be less than significant and the analysis of Project impacts to visual quality presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-16:

This comment states that the Draft EIR analysis of the Project's land use impacts is inadequate, but provides no specific points in the comment to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for land use in Section 5.16 (Land Use). The land use analysis presented in Section 5.16 of the Draft EIR assesses whether the Project would: be consistent with County General Plan land use or zoning designations for the property; be consistent with Significant Ecological Area conformance criteria; physically divide an established community; and be consistent with the County Green Building Ordinance. As analyzed in detail in Section 5.16.3 of the Draft EIR, the proposed Project would be consistent and/or compatible with all of the aforementioned considerations, and the Project would not physically divide an established community. In conclusion, potential impacts to land use would be less than significant and the analysis of Project impacts related to land use presented in the Draft EIR is adequate contrary to the contention in this comment. Refer to Responses NG-1-28 through NG-1-33, which address subsequent comments related to land use consistency.

Response NG-1-17:

This comment states that the Draft EIR analysis of the Project's noise impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for noise in Section 5.18 (Noise) and Appendix I (Noise Technical Report). The noise analysis presented in Section 5.18 and Appendix I considers and addresses potential Project noise impacts due to construction and operation of the solar generation facility and the off-site transmission line. The noise analysis considers: applicable Los Angeles and Kern County noise standards; the location of Project facilities and activities relative to potentially sensitive noise receptors (i.e., residences); background noise levels based on a baseline noise monitoring survey conducted for the Project area; the worst-case noise levels associated with Project construction and operation; and the resultant noise levels at sensitive receptors and relative to applicable noise standards. The noise analysis presented in the Draft EIR determined that pile driving (using vibratory pile drivers) during construction for solar panel support foundations would potentially exceed the applicable Los Angeles County noise ordinance standard of 55 dBA at several of the closest sensitive receptors (residences R-1, R-2, and R-3 [see Figure 5.18-2 in the Draft EIR]). With implementation of Mitigation Measure 5.18-1 – Pile Driver Orientation (refer to Section 5.18.5 in the Draft EIR), construction noise impacts would be less than significant. The noise analysis presented in the Draft EIR determined that no other construction or operational phase noise impacts would exceed applicable standards or result in potentially significant noise impacts. In conclusion, potential Project-related noise impacts would be less than significant with mitigation and the analysis of Project impacts related to noise presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-18:

This comment states that the Draft EIR analysis of fire hazard impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for fire hazards in Section 5.4 (Fire Hazards). As documented in the fire hazards analysis presented in Section 5.4, the Project site is located in Fire Zone 3 and is not located in a Very High Fire Hazard Severity Zone. Additionally, the off-site transmission line in Los Angeles and Kern counties is not located in a Very High Fire Hazard Severity Zone. As documented in the Draft EIR, the Project site is: not located in a high fire hazard area served by inadequate access; not located in an area having inadequate water pressure to meet fire flow standards; and is not located in close proximity to potential dangerous fire hazard conditions/uses. The fire hazard impact analysis presented in Section 5.4.3 of the Draft EIR states that the Project site and off-site transmission line construction and operation would constitute a potentially significant, but mitigable, fire hazard. Compliance with Los Angeles County Fire Department (LACFD) requirements for the facility site and applicable County and California Public Utility Commission General Order 95 et al fire safety requirements for the off-site transmission line combined with the required implementation of Mitigation Measure 5.4-1 – Fire Protection and Prevention Plan (see Section 5.4.5 of the Draft EIR) would reduce potential fire hazard impacts to a less than significant level. In addition, the Vegetation Management and Fire Control Measures Plan presented in Appendix K of the Draft EIR would further reduce the potential fire hazard at the Project site. In conclusion, potential Project-related fire hazard impacts would be less than significant with mitigation and the analysis of Project impacts related to fire hazards presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-19:

This comment states that the Draft EIR analysis of fire protection is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for fire protection services in Section 5.12 (Fire Protection Services). As documented in the fire protection services analysis presented in Section 5.12, the Project site and off-site transmission line areas are served by the LACFD, the Kern County Fire Department (KCFD) and adequate fire response resources serve the Project area. The fire protection services impact analysis presented in Section 5.12.3 of the Draft EIR documents the available fire protection service resources and the lack of significant impacts caused by the Project relative to creation of staffing or response time problems at the fire stations servicing the Project area. As discussed in Response NG-1-18, the Project site is located in Fire Zone 3 and is not located in a Very High Fire Hazard Severity Zone. Implementation of Mitigation Measure 5.4-1 – Fire Protection and Prevention Plan (see Section 5.4.5 of the Draft EIR) would reduce potential fire hazard impacts to a less than significant level. In addition, the Vegetation Management and Fire Control Measures Plan presented in Appendix

K of the Draft EIR would further reduce the potential fire hazard at the Project site. Therefore, construction and operation of the Project would not be expected to result in significant special fire problems or hazards as discussed in Section 5.12.3.2.2 of the Draft EIR. In conclusion, potential Project-related fire protection service impacts would be less than significant and the analysis of Project impacts related to fire protection services presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-20:

This comment states that the Draft EIR analysis of environmental safety is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of the baseline and impacts for environmental safety in Section 5.15 (Environmental Safety). Section 5.15.2 (Environmental Safety, Environmental Setting) of the Draft EIR presents the pertinent results of the Phase I Environmental Site Assessments that have been conducted for the Project, including the identification of several recognized environmental conditions related to past uses of the site. The potential Project impacts related to environmental safety are assessed in Section 5.15.3 (Environmental Safety, Project Impacts) of the Draft EIR in accordance with the eight (8) Los Angeles County significance criteria listed in Section 5.15.3.1 of the Draft EIR. The impact assessment presented in the Draft EIR identified and assessed the following potentially significant environmental safety related impacts associated with Project implementation: 1) impacts from hazardous materials use/storage during construction and operation activities; 2) impacts from potential soil contamination; 3) impacts from abandoned oil well; and 4) impacts from demolition/building materials containing hazardous materials/waste. All other potential impacts assessed in accordance with applicable County significance criteria would be less than significant, absent mitigation, as analyzed and documented in Section 5.15.3 of the Draft EIR. The pertinent mitigation measures presented in Section 5.15.5 of the Draft EIR are listed below (refer to Section 5.15.5 of the Draft EIR for more information regarding the details of each measure):

- Mitigation Measure (MM) 5.15-1: Additional assessment, and possibly remediation, of potentially contaminated soils on the Project site
- MM 5.15-2: A Soil Management Plan for Transmission Line Construction
- MM 5.15-3: The historic oil well that requires abandonment or re-abandonment shall be abandoned to current standards
- MM 5.15-4: Demolition Hazardous Building Materials Assessment and Management Plan

With implementation of the mitigation measures identified above (as presented in detail in Section 5.15.5 of the Draft EIR), all four of the aforementioned potentially significant environmental safety related impacts would be less than significant. In conclusion, potential

Project-related environmental safety impacts would be less than significant with mitigation and the analysis of Project impacts related to environmental safety presented in the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-21:

This comment states that the Draft EIR analysis of alternatives is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of alternatives in Section 6.0 (Alternatives to the Proposed Project). In accordance with CEQA Guidelines Section 15126.6, the Draft EIR assesses a range of reasonable alternatives to the proposed Project, which could feasibly attain most of the basic objectives of the proposed Project and avoid or substantially lessen any of the significant effects of the proposed Project. The Project alternatives considered in the Draft EIR consisted of:

- Alternative facility layout
- Underground off-site/on-site transmission lines

The Draft EIR also discussed alternatives that were considered, but eliminated from further consideration, and the No Project Alternative, which provides a discussion of existing conditions and what would reasonably be expected to occur in the future if the Project were not approved.

The alternatives analysis presented in the Draft EIR includes the following sections:

- 6.1 – Introduction
- 6.2 – Alternatives Considered but Eliminated from Further Consideration
- 6.3 – Alternatives Analysis
- 6.4 – Environmentally Superior Alternative

The assessment in Section 6.2 of the Draft EIR includes consideration of: alternative sites, alternative transmission line routes, alternative project size, alternative technologies, and alternative drainage improvements. The alternatives assessment presented in Section 6.3 of the Draft EIR analyzes the following alternatives in detail for all pertinent environmental resource topics, including comparisons with the proposed Project: Alternative 1 – No Project; Alternative 2 – Alternative Facility Layout; and Alternative 3 – Underground Transmission Lines. Section 6.4 of the Draft EIR assesses and identifies the environmentally superior alternative as required by CEQA Guidelines Section 15126.6. In conclusion, the analysis of alternatives presented in Section 6.0 of the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-22:

This comment states that the Draft EIR analysis of growth-inducing impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of growth-inducing impacts in Section 7.2 (Growth-Inducing Impacts). As discussed and assessed in Section 7.2 of the Draft EIR, CEQA requires the analysis of a proposed project's potential to induce growth. CEQA Guidelines Section 15126.2(d) requires that the EIR discuss the ways in which a project could be growth-inducing by fostering economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects represent direct forms of growth. A project would indirectly induce growth if would increase the capacity of infrastructure or facilities in an area in which the public service currently meets demand. Examples of indirect growth-inducing impacts include expansion of urban services into a previously un-served or under-served area, extension of transportation links, or removal of major obstacles to growth. Typically, the growth-inducing potential of a project would be considered significant if it would foster growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies. The Draft EIR analyzes the Project's potential to result in growth-inducing impacts in Section 7.2.1 (Other CEQA Considerations, Growth Caused by Direct employment), Section 7.2.2 (Other CEQA Considerations, Growth Related to the Provision of Electric Power Generation), and Section 7.2.3 (Other CEQA Considerations, Indirect Growth Effects).

As discussed in Section 7.2.1 of the Draft EIR, the Project construction labor force needed (estimated peak of 453 workers) would account for a maximum of 0.16 percent of the employment positions in Los Angeles and Kern counties (combined). The Project construction workforce needs (approximately 38 months maximum) are negligible compared to the size of the available regional workforce. As a result, construction workers would be expected to be hired locally, and workers would not be anticipated to relocate into the Project area during construction. Additionally, based on the above reported figures, construction of the Project may be anticipated to provide employment opportunities to the current unemployed construction workforce in Los Angeles and Kern counties. During operation, the Project would require approximately 16 employees for facility operation, maintenance, and security activities. According to EDD-LMI, the total number of utility related positions in the Project region in June 2009 was 23,200 jobs, which have similarly declined since 2008 (EDD LMI 2009). The Project's operational employment needs would be negligible compared to the available regional workforce. Accordingly, the Project is anticipated to hire permanent employees from the available regional workforce, and operations phase workers would not

be expected to be required to relocate to the Project area. Accordingly, the Project would not result in potentially significant growth-inducing impacts related to direct employment during construction or operation.

As discussed in Section 4.0 (Project Description) of the Draft EIR, the primary purpose of the proposed Project is to generate 230 MW of clean, renewable electrical power using solar photovoltaic technology. The Project is designed to meet the increasing demand for clean renewable electricity that is set forth in the California's statutory and regulatory goals to increase renewable power generation and reduce greenhouse gas generation. The Applicant proposes the AV Solar Ranch One Project in response to the State-mandated increases in clean, renewable electricity generation versus conventional fossil-fuel power generation sources. The proposed Project involves construction and operation of a solar photovoltaic electric generating facility and a privately-owned, 230-kV high-voltage transmission line. The Project does not involve increase or expansion of public services or removal of major obstacles to growth that would increase growth beyond land use plans and regional projections. Therefore, the Project would not result in impacts related to direct or indirect growth effects. In conclusion, the analysis of potential Project-related growth-inducing impacts presented in the Draft EIR determined that the Project would not result in significant growth-inducing impacts and the analysis of growth-inducing impacts presented in Section 7.2 of the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-23:

This comment states that the Draft EIR analysis of cumulative impacts is inadequate, but provides no specific points to support this claim. The Draft EIR presents a thorough assessment of cumulative impacts in Section 4.6 (Project Description, Cumulative Projects List) and in each of the individual environmental resource topic analyses presented in Section 5.0 (Environmental Impact Analysis) of the Draft EIR. In accordance with CEQA Guidelines, the Draft EIR presents an analysis of cumulative impacts that may result from construction and operation of the proposed Project. As defined in Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Draft EIR Section 4.6 presents the cumulative projects basis for consideration in the cumulative impact analyses presented in Section 5.0 by environmental topic.

The cumulative impact analyses in Draft EIR Section 5.0 consider a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic study area of each analysis is based on the nature of the geography surrounding the proposed Project, the characteristics of each resource, and the region to which they apply. In addition, each project in a region will have its own implementation schedule, which may or may not coincide or overlap with the proposed

Project's schedule. For reference, the proposed AV Solar Ranch One Project is planned to be under construction between the fourth quarter of 2010 through the fourth quarter of 2013.

CEQA Guidelines Section 15130(b)(1) recommends two methodologies for establishing the cumulative impact scenario. One approach is to use "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency" (CEQA Guidelines §15130(b)(1)(A)). Another approach is to use "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact" (CEQA Guidelines § 15130(b)(1)(B)). The cumulative impact analysis presented in the Draft EIR considers a combination of both methodologies to provide a tangible understanding and context for analyzing the potential cumulative effects of the proposed Project. The geographic boundary was established to include a review of applicable projects within 5 miles of the proposed Project site and off-site transmission line route. Additionally, the cumulative resource study area was expanded to include a review of projects within the City of Lancaster, the Centennial master planned community along SR-138, and the community of Gorman near the intersection of SR-138 and I-5.

The cumulative scenario was developed through a review of active project lists (as of September 2009) from LACDRP, Kern County Planning Department, City of Lancaster, California Energy Commission (CEC), the California Independent System Operator (CAISO) interconnection queue and the U.S. Bureau of Land Management (BLM). The cumulative impact basis presented in the Draft EIR also considers planning documents, including general plans, area plans, specific plans, and previously certified EIRs, and Southern California Association of Governments (SCAG) growth projections.

Refer to Table 4.6-1 in the Draft EIR for a tabular listing of projects and planning areas identified that are considered in the Project cumulative impact analysis. The locations of the cumulative projects considered are shown on Figure 4.6-1. The list of cumulative projects considered in the Draft EIR was developed in September 2009 to facilitate completion of the necessary assessments following issuance of the AV Solar Ranch One EIR Notice of Preparation in April of 2009. Based on the assessments of potential cumulative impacts (by environmental resource topic) presented in Section 5.0 of the Draft EIR, the proposed Project would not result in any significant cumulative effects (i.e., all potentially significant cumulative effects would be less than significant with mitigation).

In conclusion, the analysis of potential cumulative impacts presented in the Draft EIR determined that with implementation of specified mitigation, the proposed Project would not result in significant cumulative impacts and the analysis of cumulative impacts presented in Sections 4.6 and 5.0 of the Draft EIR is adequate contrary to the contention in this comment.

Response NG-1-24:

This comment states that there is no credible evidence that many of the mitigation measures, including those relating to biological, cultural and paleontological, and noise impacts, would mitigate the Project's impacts to a level of insignificance; however, this comment does not provide any specific points to support these claims. CEQA requires an EIR to describe feasible mitigation measures, which could minimize significant adverse impacts. (CEQA Guidelines § 15126.4.) Mitigation measures need only be reasonable (*Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1019). "CEQA does not require analysis of every imaginable mitigation measure; its concern is with feasible means of reducing environmental effects." (*Concerned Citizens of South Central Los Angeles v. Los Angeles Unified School Dist.* (1994) 24 Cal.App.4th 826, 841 [emphasis in original]; CEQA Guidelines § 15126.4 (a)(1)). When examining whether mitigation measures are supported by substantial evidence the entire administrative record is examined including staff reports, the EIR, and testimony at administrative hearings (*City of Walnut Creek v. County of Contra Costa* (1980), 101 Cal.App.3d 1012, 1018; see also *Laurel Heights, supra*, 47 Cal.3d at 422). "Substantial evidence" means "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines § 15384 (a).)

The Draft EIR presents a thorough impact assessment (Section 5.0, Environmental Impact Analysis, and associated technical studies) for each environmental resource topic, including: regulatory setting; environmental setting; Project impacts; cumulative impacts, impact significance; mitigation measures; and level of significance after mitigation. The impact assessments, mitigation measures and residual impact findings (i.e., with consideration of mitigation measure effectiveness) presented in the Draft EIR for all applicable resource topics, including biological resources (Section 5.7), cultural and paleontological resources (Section 5.8), and noise (Section 5.18), are thorough and conclude that all potentially significant impacts would be reduced to less than significant levels with mitigation. In conclusion, the identification of impacts, appropriate and feasible mitigation, and the analysis of mitigation measure effectiveness presented in the Draft EIR are adequate contrary to the contentions in this comment.

Response NG-1-25:

This comment states that the Final EIR includes "significant new information" within the meaning of California Public Resources Code Section 21092 and CEQA Guidelines Section 15088.5, and that the County was therefore required to revise and recirculate the Draft EIR, but it unlawfully failed to do so. However, this comment does not provide any specific points to support this claim. The Final EIR does not present "significant new information," thus there is no justification or need to recirculate the Draft EIR as explained in the following

discussion. No new technical reports were presented, no new significant impacts were identified and no substantial changes were made to the Draft EIR.

Therefore, the Final EIR for the Project does not require recirculation under CEQA. (See Public Resources Code § 21092.1, CEQA Guidelines § 15088.5). CEQA Guidelines Section 15088.5 requires recirculation of an EIR prior to certification of the Final EIR when "significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review." "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect." (CEQA Guidelines § 15088.5.) CEQA Guidelines Section 15088.5 (a) contains an illustrative list of examples of "significant new information" requiring recirculation:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

In addition, CEQA Guidelines Section 15088.5(b) provides that "recirculation is not required where the new information added to the EIR merely clarifies and amplifies or makes insignificant modifications in an adequate EIR."

This comment does not provide any specific points to support the claim that the Final EIR presents "significant new information." The record does not support the contention that there is significant new information requiring recirculation of the Draft EIR.

Response NG-1-26:

This comment states that the responses to comments in the Final EIR are not based on good-faith, reasoned analysis. However, this comment does not provide any specific points to support this claim. Contrary to the contention in this comment and as explained in the following discussion, the Final EIR presents a thorough, reasoned, good-faith analysis of the comments received on the Draft EIR and provides detailed responses to all substantive written and oral (public testimony) comments received on the Draft EIR.

CEQA requires the lead agency to evaluate and respond to all comments on environmental issues (CEQA § 21091 (d)(2)(A)). The agency must provide "written responses that evince a good faith and reasoned analysis why specific comments and objections were not accepted. The public agency need not respond to every comment raised . . . but it must specifically respond to the most significant environmental questions raised in opposition to the project." (*Gallegos v. State Bd. of Forestry* (1978) 76 Cal.App.3d 945, 954; CEQA Guidelines § 15088(c).) The adequacy of responses is determined by several factors: whether the responses are "totally conclusory"; whether the responses contain "specific information as to the basis for rejecting the objection"; whether the responses are supported with "empirical information, scientific authorities, and explanations"; and, if data is unavailable, whether that is explained (*Ebbetts Pass Forest Watch v. Dept. of Forestry and Fire Protection* (2004) 123 Cal.App.4th 1331, 1357–58 [superseded on other grounds]).

The Draft EIR was circulated for a 45-day public review period as required by CEQA from June 16, 2010 to July 30, 2010. The County of Los Angeles Regional Planning Commission held a public hearing on June 30, 2010 and took public testimony. Refer to Section 3.0 of the Final EIR for the June 30, 2010 RPC Hearing minutes and responses to oral comments received at the hearing.

The Responses to Written Comments received during the 45-day public review are divided into four sections as follows: State Agencies (SA); Local Agencies (LA); Organizations (ORG); and Individuals (I). A tabular summary of the comments received on the Draft EIR that are fully responded to in the Final EIR Section 4.0 follows:

SUMMARY OF WRITTEN COMMENTS ON DRAFT EIR

Date	Commenter/Affiliation	Comment Item ID	Number of Comments Identified
Federal Agencies			
None			
State Agencies (SA)			
7/15/20	Dave Singleton/Native American Heritage Commission	SA-1	14
7/16/10	Carl Shiigi/California Department of Transportation	SA-2	8
7/30/10	Scott Morgan/State Clearinghouse	SA-3	2
Local Agencies (LA)			
7/9/10	Gary T. K. Tse/Los Angeles County Sheriff Department	LA-1	2
7/15/10	John R. Todd/Los Angeles County Fire Department	LA-2	6
7/15/10	Richard Kite/City of Palmdale	LA-3	1
7/20/10	Bret Banks/Antelope Valley Air Quality Management District	LA-4	3

Date	Commenter/Affiliation	Comment Item ID	Number of Comments Identified
Organizations (ORG)			
7/30/10	Kate Allen/Antelope Valley Group of Sierra Club	ORG-1	5
7/21/10	Elizabeth Klebaner/Adams Broadwell Joseph & Cardozo	ORG-2	1
7/30/10	Elizabeth Klebaner/Adams Broadwell Joseph & Cardozo	ORG-3	79
Individuals (I)			
6/21/10	Shizuko Hill	I-1	1
6/21/10	Ponciano Manalo	I-2	2
7/26/10	L. Dean Webb	I-3	7
7/30/10	Several Residents of Antelope Acres (Stout, Kerekes, Seybold, Fuentes)	I-4	6

The Final EIR included a response to every comment made on the Draft EIR during the public comment period. (See Final EIR Section 3.0 for responses to oral comments received during the Commission public hearing and Final EIR Section 4.0 for responses to comment letters received during the 45-day public comment period.) The responses evince a good faith and reasoned analysis and are supported by empirical, scientific, and explanatory information.

In conclusion, the Final EIR, including the responses to comments in the Final EIR, is based on good-faith, reasoned analysis and are considered to be adequate contrary to the contention in this comment.

Response NG-1-27:

This comment states that the CEQA Findings of Fact are not supported by substantial evidence. However, this comment does not provide any specific points to support this claim. CEQA requires that findings be supported by substantial evidence. (CEQA Guidelines § 15091.) The standard for adequacy of an EIR is "not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (CEQA Guidelines § 15151.) Indeed, all that is needed is "**any** substantial evidence in the record to support the findings." (*Smith v. County of Los Angeles* (1989) 211 Cal.App.3d 188, 198 [original emphasis] [citation omitted].) Substantial evidence means "enough relevant information and reasonable inferences . . . that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines § 15384 (a).) As discussed in the Draft EIR, the Final EIR, and Responses NG-1-1 through NG-1-26, there is substantial evidence in the record to support the findings.

Moreover, the commenter does not identify how the evidence before the County is insufficient to reach the conclusions set forth in the CEQA Findings of Fact. (*Environmental*

Council of Sacramento v. City of Sacramento (2006) 142 Cal.App.4th 1018, 1026.) The test is whether, "based on the evidence before the agency, a reasonable person could not reach the conclusion reached by the agency." (*Harris v. City of Costa Mesa* (1994) 25 Cal.App.4th 963, 969 [citation omitted].) Therefore, it must be demonstrated that there is no substantial evidence in the administrative record supporting the CEQA Findings of Fact or project approval (*Snarled Traffic Obstructs Progress v. City & County of San Francisco* (1999) 74 Cal.App.4th 793, 798 [citation omitted]; CEQA Guidelines § 15384).

Response NG-1-28:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the general contention that the Conditional Use Permit (CUP) and the Vesting Tentative Tract Map (VTTM) are unlawful and not in accord with the purposes of Titles 21 and 22 of the Los Angeles County Code. Please refer to Responses NG-1-30 through -32 for information on the CUP and NG-1-33 for information on the VTTM.

Response NG-1-29:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the general contention that the approval of the CUP was unlawful and not in accord with the purposes of Title 22 of the Los Angeles County Code (the County Zoning Ordinance). Please refer to Responses NG-1-30 though -32 for information on the CUP.

Response NG-1-30:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the contention that the Open Space Zone (O-S zone) is the only zone that permits solar uses. The Heavy Agriculture (A-2) zone provision concerning the types of electric generating facilities allowed with a CUP is broader than the corresponding O-S zone provision. As described in Draft EIR Section 5.16.2.1, the Project site is located on A-2 zoned land. As discussed in Draft EIR Section 5.16, the Project would be permitted through the issuance of a CUP as provided by County Zoning Ordinance Section 22.24.150, which conditionally permits in the A-2 zone "electric distribution substations, electric transmission substations and generating plants." The Project will include photovoltaic solar panels, associated electrical and distribution equipment, an on-site electricity substation, and a 230-kilovolt transmission line approximately 4.25 miles in length, which will connect to Southern California Edison's proposed Whirlwind Substation

north of the Project site in southern Kern County. (Draft EIR Section 4.4.) The Project will generate approximately 230 megawatts of clean, renewable electrical power and integrate the electrical output of the Project into the electrical grid. (Draft EIR Section 4.4.) Therefore, based on its characteristics, the Project is considered equivalent to an electric generating plant and is allowed with a CUP in the A-2 zone. (Draft EIR Section 5.16.3.2.2) Please also refer to Response NG-1-31.

Response NG-1-31:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the contention that the record does not support the conclusion that the Project is a permitted use within the A-2 zone. As discussed in Response NG-1-30, the Project is equivalent to an electric generating plant and is permitted within the A-2 zone (Draft EIR Section 5.16.3.2.2). The Project will include photovoltaic solar panels, associated electrical and distribution equipment, an on-site electricity substation, and a 230-kilovolt transmission line approximately 4.25 miles in length, which will connect to Southern California Edison's proposed Whirlwind Substation north of the Project site in southern Kern County (Draft EIR Section 4.4). The Project will generate approximately 230 megawatts of clean, renewable electrical power and integrate the electrical output of the Project into the electrical grid (Draft EIR Section 4.4). These project characteristics and the many graphic images in the Draft DEIR depicting the various project elements all lead to the reasonable conclusion that the facility is an electric generating plant.

Response NG-1-32:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the contention that there is not sufficient evidence in the record for the County to make findings to approve the CUP.

As discussed in Draft EIR Table 5.16-1, the Project use is consistent with all applicable land use policies and ordinances including Los Angeles County General Plan policies, Antelope Valley Area Wide Plan policies, and the County Zoning Ordinance.

As discussed in Draft EIR Section 5.16.2.1, the Project site is located within the Antelope Valley Areawide General Plan of the Los Angeles County General Plan and has a land use designation of "Non-Urban 1" (N-1). Under the N-1 land use designation, allowable uses include utility installations. As discussed in Draft EIR Section 5.16.3.2.1, the Project, based on its enumerated characteristics, is considered to be a utility installation and, therefore, would be consistent with the General Plan Land Use designation for the Project site. In addition, as discussed in Draft EIR Table 5.16-1 (page 5.16-18), the Project is consistent with

Los Angeles County General Plan Conservation, Open Space, and Recreation policies 2 (support the conservation of energy and encourage the development and utilization of new energy sources including solar), 3 (promote the use of solar energy to the extent possible), and 7 (preserve significant ecological areas by appropriate measures, including preservation, mitigation, and enhancement). In addition, Draft EIR Table 5-16-1 (pages 5.16-18 through -23) discusses the Project's consistency with Antelope Valley Area Wide Plan policies. The Project is consistent with Antelope Valley Area Wide Plan policies relating to agricultural lands, resource conservation, physical appearances/community image, environmental resource management, recreation, energy consumption, non-residential uses in non-urban areas, and significant ecological areas.

The burden of proof provisions in County Zoning Ordinance Section 22.56.040 mirror the required findings set forth in County Zoning Ordinance Section 22.56.090. As discussed in Draft EIR Table 5.16-1 (page 5.16-23), the Project is consistent with County Zoning Ordinance Section 22.56.040. The Project is in a rural area with low residential density and is largely dominated by open space and agricultural uses. Additionally, the Project is associated with a low level of activity during operations, with minimal noise, emissions, lighting, and human presence. Therefore, the Draft EIR concluded that the Project's requested use at the location will not: 1) adversely affect the health, peace, comfort or welfare of persons residing or working in the surrounding area; or 2) be materially detrimental to the use, enjoyment or valuation of property of other persons located in the vicinity of the site; or 3) jeopardize, endanger or otherwise constitute a menace to the public health, safety or general welfare. The Draft EIR also concluded that the Project site is adequately served by public or private service facilities as are required (see Draft EIR Table 5.16-1 [page 5.16-23]; Section 5.12 [Fire Protection Services]; Section 5.14 [Utility Services]).

Response NG-1-33:

This comment does not state a specific concern or question regarding the adequacy of the analysis contained in the EIR. Therefore, a response is not required pursuant to CEQA. Moreover, the County disagrees with this comment and the contentions that the VTTM is unlawful, violates the Subdivision Map Act and that the findings regarding the VTTM approval were not supported by substantial evidence. No substantive basis or reasoned analysis is provided in the comment to support the conclusions posited. The VTTM is not an authorization to change the physical environment and, in and of itself, the VTTM does not directly authorize any use or development on the Project site (Draft EIR Section 4.2).

Response NG-1-34:

This comment states that Northrop Grumman Corporation is appealing the approval of the AV Solar Ranch One project and provides a Letter of Authorization for specified attorneys to

represent NG in this matter, but does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft EIR. Therefore, a response is not required pursuant to CEQA. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

6.2.4 Melody Mokres (MM-1)

Response MM-1-1:

This comment requests that the hearing for the AV Solar Ranch One Project be postponed because a public hearing has not been held regarding the County's identification of solar and wind farms, as indicated by the blue-shaded section of the General Plan Map of the Antelope Valley. The County has not adopted a General Plan map showing a solar-wind-designated area, and the proposed AV Solar Ranch One Project is not related to any such mapping effort or designated area. Amendments to the General Plan require public hearings, thus adoption of any such future General Plan mapping changes would be open to public comment, as applicable. See Draft EIR Section 4.1.2 for information regarding the AV Solar Ranch One Project purpose and objectives, including details on the Project site selection criteria.

Response MM-1-2:

This comment states that due to the amount of land that will be removed by the Project from the original intent for land use, a public hearing should have been conducted on the Project, and such a hearing should have been conducted in the Antelope Valley. The County of Los Angeles conducted a Scoping Meeting in accordance with CEQA § 21083.9(a)(2), which was held in the community of Antelope Acres at the Westside Community Church on May 14, 2009, in order to facilitate public review and comment on the Project. The Scoping Meeting was noticed in the Project Notice of Preparation, which was transmitted on April 29, 2009, and circulated to the public in accordance with CEQA Guidelines § 15082. The Draft EIR analyzes impacts to land use (including analysis of the Project consistency with agricultural opportunity areas), agricultural resources, and visual qualities in Section 5.16, Section 5.9, and Section 5.10, respectively. Additionally, cumulative impacts were evaluated for each resource discipline in the Draft EIR. The Los Angeles County Regional Planning Commission held two properly noticed public hearings in Los Angeles on June 30, 2010 (Draft EIR), and September 15, 2010 (Final EIR and associated entitlements).

Response MM-1-3:

In accordance with CEQA Guidelines §15126, the EIR considers and discusses environmental impacts, and identifies mitigation measures to minimize significant environmental effects. Ongoing discussions between the Antelope Acres Town Council and the Applicant are not related to the Project's environmental impacts or mitigation measures

to minimize significant environmental effects. Accordingly, the discussions are not within the scope of CEQA or the EIR and, therefore, are not addressed in the EIR.

6.3 LATE COMMENT LETTERS

This section presents the four late comment letters received on the Final EIR (August 2010). Refer to Table 6-1 for a summary of the late comment letters. The attached letters have the comments delineated in the margins for cross reference to the written responses presented in Section 6.2.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, OFFICE OF PUBLIC
TRANSPORTATION AND REGIONAL PLANNING
IGR/CEQA BRANCH
100 SOUTH MAIN STREET
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337

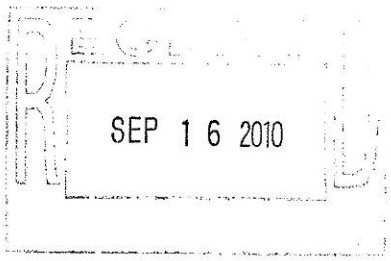
CT-1

Flex your power!
Be energy efficient!

September 14, 2010

IGR/CEQA FEIR CS/100902
County of Los Angeles
AV Solar Ranch One Project
Vic. LA-138-22.05, SCH# 2009041145

Ms. Christina Tran
County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012



Dear Ms. Tran:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Final Environmental Impact Report (FEIR) for the AV Solar Ranch One Project. The proposed project consists of a 230-megawatt (MW) solar photovoltaic (PV) facility on approximately 2,100 acres of former agricultural land in northern Los Angeles County along State Route 138 (SR-138). Based on the information received, we have the following comments:

This letter is submitted to you in order to clarify the ultimate highway facility segment for the future State Route 138 (SR-138) corridor between I-5 and SR-14.

An approved Project Study Report/Project Development Support (PSR/PDS), Preliminary Environmental Analysis Report, Initial Site Assessment Report, and Stormwater Data Report was completed in December of 2008 by Caltrans Office of Project and Special Studies. Of concern are the future highway cross sections at or around the proposed project site. The future corridor envisions a 6 lane access controlled expressway or freeway (72 feet) with a 62 foot median with 30 foot recovery zones/shoulders as part of the ultimate highway concept in the vicinity of the project.

CT-1-1

Since it has not yet been determined if the future highway alignment would use the existing centerline or be built north or south of the existing centerline, the needed right-of-way preservation would be 300 feet or 150 feet north of and150 feet south of the existing centerline to accommodate these unknown factors. Based on these highway requirements, no permanent structures should be built within the ultimate footprint of these three cross-sections. This means that actions to preserve the right-of-way throughout the corridor will be needed so that physical improvements would remain viable as major developments occur.

CT-1

If you have any questions regarding our comments, you may reach me at (213) 897-1726 and please refer to our record number 100902/CS.

CT-1-1

Sincerely,

Carl Shiigi
IGR/CEQA Coordinator
Office of Regional Planning

cc: Scott Morgan, State Clearinghouse

EK-1

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037
TEL: (650) 589-1660
FAX: (650) 589-5062
eklebaner@adamsbroadwell.com

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
JASON W. HOLDER
MARC D. JOSEPH
ELIZABETH KLEBANER
RACHAEL E. KOSS
LOULENA A. MILES
ROBYN C. PURCHIA

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL
GLORIA D. SMITH

SACRAMENTO OFFICE
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209

September 14, 2010

By Email and U.S. Mail

c/o Rosie Ruiz
Chair Wayne Rew and Commissioners
Regional Planning Commission
Los Angeles County
Department of Regional Planning
Impact Analysis Section, Room 1348
320 West Temple Street
Los Angeles, CA 90012
rruiz@planning.lacounty.gov

Re: Comments on the Final Environmental Impact Report for the AV Solar Ranch One Project (County Project R2009-02239, Conditional Use Permit No. 200900026)

Dear Chairman Rew and Commissioners:

We write on behalf of California Unions for Reliable Energy ("CURE") to comment on the Final Environmental Impact Report ("FEIR") prepared by the Los Angeles County Department of Regional Planning ("DRP") for the 230 MW AV Solar Ranch One Project ("Project") proposed by AV Solar Ranch 1, LLC. Although we will not attend tomorrow's hearing on the Project, we urge the Planning Commission to not approve the FEIR and to direct DRP to revise and recirculate a draft EIR to the public. EK-1-1

CURE submitted extensive comments on the draft EIR on July 30, 2010. After carefully reviewing the FEIR, we conclude that DRP failed to adequately respond to CURE's comments and that significant new information has been added to the EIR. For these reasons, DRP's contention that recirculation of the EIR is *not* required under the California Environmental Quality Act ("CEQA") lacks merit. -2

When significant new information is added to a draft environmental review document after the close of public comment and before Project certification, a -3

revised draft environmental review document must be noticed and recirculated for public comment.[1] New information is significant for the purpose of CEQA when the environmental review document is "changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect."[2] Here, DRP has revised its analysis in response to CURE's July 30, 2010 comments to include a *new* mitigation measure for *previously unidentified impacts* to the federally listed Desert tortoise and *new*, unsupported, *analyses* regarding baseline biological and air quality conditions at the Project site.[3] Additionally, DRP now claims that this *industrial* Project is *not* subject to the requirements of Water Code sections 10910 and 10912. This new information qualifies as "significant new information" under CEQA. -3

As detailed in CURE's July 30, 2010 comments, the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. The FEIR still does not adequately analyze potentially significant Project impacts in several critical resource areas, including air quality, biological resources, visual resources, and water quality, and fails to propose adequate mitigation for the significant impacts that it does identify. The FEIR continues to fail to present a stable and finite Project description and to include an adequate Water Supply Assessment as required by Sections 10910 and 19012 of the California Water Code. These defects, as well as numerous additional analytical deficiencies described fully in our July 30, 2010 comments, render the DEIR, and the FEIR, invalid as an environmental review document under CEQA. -4 -5

The EIR must be recirculated for public review and comment in accordance with CEQA.[4] Failure to circulate the EIR deprives the public of a meaningful opportunity to comment upon the substantial adverse effects of the Project. -6

Sincerely,

/s/

Elizabeth Klebaner

---

[1] Pub. Resources Code, § 21092.1.
[2] Cal. Code Regs. tit 14, § 15088.5.
[3] *See* Department of Regional Planning, Los Angeles County, AV Solar Ranch One Project Final Environmental Impact Report, August 2010, pp. RORG-3-3, 3-13, 3-36-37, 3-45-46.
[4] *See Cadiz Land Co., Inc. v. Rail Cycle, L.P.* (2000) 83 Cal.App.4th 74, 91.

EK:

cc: ctran@planning.lacounty.gov (email only)
kszalay@planning.lacounty.gov (email only)

NG-1

NON-APPLICANT

Date September 24, 2010

Mr. Don Ashton
Deputy Executive Officer
Los Angeles County Board of Supervisors
Room 383, Kenneth Hahn
Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Mr. Ashton:

PROJECT NO./
CUP NO.: Project No. R-2009-02239

APPLICANT: AV Solar Ranch One, LLC

LOCATION: The project is located in the Antelope Valley, in unincorporated Los Angeles County, approximately 15 miles northwest of downtown Lancaster. The project site consists of approximately 2,100 acres of land, and is located within Sections 11, 13, 14, and 24 in Township 8 North, Range 15 West, and within Section 18 in Township 8 North, Range 14 West (San Bernardino Base and Meridian). The project is located in an area both north and south of SR-138, and is approximately bounded on the north by West Avenue B-8, on the south by West Avenue E, on the east by 155th Street West and on the west by 180th Street West.

Zoned District A-2

Related zoning matters:

CUP(s) or VARIANCE No. Conditional Use Permit No. 200900026

Change of Zone Case No.

Other Vesting Tentative Tract Map No. 071035 and Environmental Assessment No. 200900027

This is an appeal on the decision of the Regional Planning Commission in the subject case. This form is to be presented with a check (or money order) and personal identification prior to the appeal deadline at 5:00 p.m. at the above address. Contact the Zoning section of the Board of Supervisors for more information: (213) 974-1426

This is to appeal: (Check one)

____	The Denial of this request	$789.00*
√	The Approval of this request	$789.00*

***For Subdivisions $130.00 of this amount is to cover the cost of the hearing of the Board of Supervisors**

NG-1-1

NG-1

NG-1-1

FILED

2010 SEP 24 PM 3:06

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

NG-1

Briefly, explain the reason for this appeal is as follows (attach additional information if necessary):

Please see the attached rider for an explanation of the reasons for this appeal.

NG-1-1

NORTHROP GRUMMAN SYSTEMS CORPORATION

x _____
(Signed) Appellant

Its Authorized Signatory

Kyndra Joy Casper, Esq.
Print Name

Sheppard Mullin Richter & Hampton LLP

333 South Hope Street, 43rd Floor

Los Angeles, California 90071

(213) 617-4157

kcasper@sheppardmullin.com

NG-1

RIDER

This Rider supports, and is part of, the non-applicant appeal by Northrop Grumman Systems Corporation ("NGSC") of the Regional Planning Commission's (the "Planning Commission") certification of the Final Environmental Impact Report (the "FEIR") and approval of Conditional Use Permit No. 200900026 (the "CUP") and Vesting Tentative Tract Map No. TR071035 (the "VTTM") for the AV Solar Ranch One Project (the "Project") proposed by AV Solar Ranch One, LLC ("AV Solar") on a 2,100-acre site (the "Site") located in Los Angeles County (the "County"). NG-1-2

The reasons for this appeal are as follows:

I. The Planning Commission's certification of the FEIR for the Project was unlawful for the following reasons: -3

A. Pursuant to the State CEQA Guidelines (the "Guidelines"), only environmental effects that are dismissed in an initial study as "clearly insignificant and unlikely to occur" can be omitted from an environmental impact report ("EIR"), unless the agency later receives information that is inconsistent with the findings of the initial study. Guidelines § 15143. The Draft Environmental Impact Report (the "DEIR") violated Section 15143 because it failed to analyze the Project's impacts with respect to several environmental subjects, but in each instance failed to make the finding required by Section 15143 to lawfully eliminate those subjects from full environmental review in the DEIR. -4

B. The County failed to comply with notice requirements with respect to preparation and distribution of the DEIR and the FEIR. -5

C. The DEIR project description is inadequate. An accurate and stable project description is the *sine qua non* of an informative and legally sufficient EIR. -6

D. Both the DEIR and the FEIR unlawfully failed to analyze the Project's impact on the operation of NGSC's Tejon Test Facility, in particular its impact on NGSC's operation of radar testing that occurs on Range 1 at the Tejon Test Facility. -7

E. An EIR must be "prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." Guidelines § 15151. An EIR must also contain facts and analysis, not just the bare conclusions of a public agency. The certification of an EIR constitutes a prejudicial abuse of discretion if the failure to include relevant information precludes informed decision-making and informed participation, thereby thwarting the statutory goals of the EIR process. The DEIR for the Project was not prepared with a sufficient degree of analysis to permit a decision that -8 -9

intelligently took account of the environmental consequences of the Project, which precluded informed decisionmaking and public participation, as follows: -9

1. The DEIR's analysis of the Project's air quality impacts is inadequate. -10

2. The DEIR's analysis of the Project's biology impacts is inadequate. -11

3. The DEIR's analysis of the Project's cultural and paleontological impacts is inadequate. -12

4. The DEIR's analysis of the Project's impact on agricultural resources is inadequate. -13

5. The DEIR's analysis of the Project's impacts on utilities is inadequate. -14

6. The DEIR's analysis of the Project's impacts on visual qualities is inadequate. -15

7. The DEIR's analysis of the Project's land use impacts is inadequate. -16

8. The DEIR's analysis of the Project's noise impacts is inadequate. -17

9. The DEIR's analysis of fire hazard impacts is inadequate. -18

10. The DEIR's analysis of fire protection is inadequate. -19

11. The DEIR's analysis of environmental safety is inadequate. -20

12. The DEIR's analysis of alternatives is inadequate. -21

13. The DEIR's analysis of growth-inducing impacts is inadequate. -22

14. The DEIR's analysis of the Project's cumulative impacts is inadequate. -23

F. The DEIR identifies numerous significant impacts caused by the Project and concludes that most or all of the significant impacts would be mitigated to a level of insignificance with the implementation of mitigation measures. However, there is no credible evidence that many of these mitigation measures, including, but not limited to, mitigation measures relating to biology impacts, cultural and paleontological impacts and noise impacts, would mitigate the Project's impacts to a level of insignificance. -24

G. The FEIR includes "significant new information" within the meaning of Section 21092 of the California Public Resources Code and Section 15088.5 of the -25

Guidelines, and the County was therefore required to revise and recirculate the DEIR, but it unlawfully failed to do so. -25

H. The responses to comments in the FEIR are not based on good-faith, reasoned analysis. -26

I. The Findings of Fact regarding the FEIR are not supported by substantial evidence. In addition, the Planning Commission failed to provide an adequate explanation regarding the logical step between the ultimate Findings of Fact regarding the FEIR and facts in the record. -27

II. The Planning Commission's Approval of the CUP and VTTM was unlawful and not in accord with the purposes of Titles 21 and 22 of the Los Angeles County Municipal Code (the "Code"). -28

A. The Planning Commission's approval of the CUP was unlawful and not in accord with the purposes of Title 22 of the Code for the following reasons: -29

1. The Project is not a permitted or conditionally permitted use within the A-2 zone. The Code only permits solar uses (with a conditional use permit) in the Open Space Zone (the "O-S Zone"), not in the A-2 zone where the Site is located. Specifically, Section 22.40.430 of the Code allows for "energy generating or storage devices, including but not limited to solar, wind or geothermal devices" with a conditional use permit in the O-S Zone. The Project, however, is not located in the O-S Zone. -30

2. There is not substantial evidence in the record to support the County's conclusion that the Project is equivalent to "electric distribution substations, electric transmission substations and generating plants, including microwave facilities used in conjunction with any one thereof," which are conditionally permitted uses in the A-2 Zone. Code § 22.24.150. -31

3. Pursuant to Section 22.56.090 of the Code, the Planning Commission made numerous findings in order to approve the CUP. There is not substantial evidence in the record to substantiate the Planning Commission's findings, including, but not limited to, its findings regarding consistency (or lack thereof) of the Project with the County's general plan, its adverse affects on the health, comfort and welfare of persons residing or working in the area, its ability to jeopardize public health and general welfare, and the adequacy (or lack thereof) of public and private service facilities for the Project. -32

B. The Planning Commission's approval of the VTTM was unlawful for the following reasons: -33

1. The Planning Commission's approval for the VTTM was not in accord with the purposes of Title 21 of the Code.

2. The Planning Commission's approval of the VTTM violated provisions of the Subdivision Map Act, including but not limited to, Government Code Section 66474.

3. The Planning Commission's findings regarding the VTTM approval were not supported by substantial evidence.

-33

NG-1

NORTHROP GRUMMAN

Northrop Grumman Corporation
Aerospace Systems

Strike and Surveillance
Systems Division
One Hornet Way
El Segundo, California 90245-2804

September 22, 2010

Mr. Don Ashton
Deputy Executive Officer
Los Angeles County Board of Supervisors
Room 383, Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Re: Letter of Authorization

Dear Mr. Ashton:

Northrop Grumman Corporation ("NGC") is appealing the approval of the AV Solar Ranch One project that was approved by the Los Angeles County Regional Planning Commission on September 15, 2010. In connection with the appeal, NGC hereby authorizes Kyndra Joy Casper, Esq. and James E. Pugh, Esq., or any other duly designated attorney at Sheppard Mullin Richter & Hampton, LLP, to act as its agent and representative for any matter associated with this matter.

Very truly yours,

Kathleen M. Paralusz
Senior Counsel
Northrop Grumman Corporation

NG-1-34

MM-1

Melody Mokres.txt

From: Melody Mokres [melody@dslextreme.com]
Sent: Tuesday, September 14, 2010 10:01 PM
To: Tran, Christina
Cc: fifthdistrict@lacbos.org
Subject: County Project R2009-02239 Solar Ranch One

To: Regional Planning Commission

Comments on the Antelope Valley Solar Ranch One Project

I am requesting that the hearing for the Antelope Valley Solar Ranch One project be postponed for the following reasons.

1. There has not been a public hearing regarding the identification by the county of areas suitable for solar and wind farms as indicated in the blue shaded section of the General Plan Map of the Antelope Valley. This issue has never been discussed at any public meeting.

MM-1-1

2. Due to the amount of land that will be removed from the original intent for land use, i.e. orchards, vineyards and other agricultural opportunity areas, significantly changing the look and use of the Northwest Los Angeles County, a public hearing should have been done by planning on this solar project and the cumulative effects stemming from this project and the next generation of anticipated projects.

In addition, hearings should have been conducted in the Antelope Valley as opposed to requiring residents to drive to Planning Commission Hearings in Los Angeles. Considering the size of the Antelope Valley and potential uses of this area, a satellite planning office should be set up here in the northwest county.

MM-1-2

3. I understand that there is some type of mitigation being worked on between Antelope Valley Solar Ranch One and the Antelope Acres Town Council. I have been informed by a Town Council member that mitigation is only in the beginning stages and that it is realized if nothing is stated in writing that any mitigation is only on good faith. Therefore, I would like to see the hearing postponed until any and all mitigations are in writing.

MM-1-3

Thank you for your consideration.

Melody Mokres
8202 W. Ave. "E"
Antelope Acres, CA
661-942-1998

ATTACHMENT A
EXPONENT REPORT

This attachment presents the Exponent Report titled *Impact of the Antelope Valley Solar Ranch on the Tejon Test Facility* (dated November 2, 1010) associated with Written Response NG-1-7 in Section 6.2.2 of this Final EIR (November 2010).

Exponent®

Electrical and Semiconductors Practice

Impact of the Antelope Valley Solar Ranch on the Tejon Test Facility

November 2, 2010

Exponent®
Failure Analysis Associates®

Impact of the Antelope Valley Solar Ranch on the Tejon Test Facility

November 2, 2010

Prepared for

AV Solar Ranch 1, LLC
1111 Broadway, 4th Floor
Oakland, CA 94607

Prepared by

Stig L. Nilsson, P.E., Principal Engineer*
Joshua Phinney, Ph.D., P.E., Senior Managing Engineer
Timothy Chevalier, Ph.D., Senior Associate
Exponent, Inc.
5401 McConnell Ave.
Los Angeles, CA 90066

*Registered Professional Control System Engineer, California, #3793

1006033.000 A0T0 1110 SLN1

Executive Summary

Exponent was retained by AV Solar Ranch 1, LLC to perform an engineering analysis of the proposed Antelope Valley Solar Ranch (AVSR) photovoltaic (PV) project as it relates to the Northrop Grumman Systems Corporation (NGSC) Tejon Radar Test Facility. NGSC asserts that the AVSR project would elevate background radar returns, sometimes referred to as "clutter," to a level that would unacceptably affect NGSC's ability to operate Range 1 of the Tejon facility. NGSC does not state that AVSR compromises its entire operation or the ability to perform measurements on other test ranges present at the Tejon site. After analysis of the available information, Exponent has concluded that the construction and operation of AVSR will not have a significant effect on NGSC's ability to operate Range 1 of the Tejon Test Facility. Furthermore, to the extent that the construction and operation of AVSR could produce incremental "clutter," we conclude that there are well recognized and reasonable means of accounting for this effect that would allow NGSC to continue normal operation.

NGSC has taken the position that to perform the testing required under its existing and anticipated contracts, the Tejon Test Facility must have a range of noise floor extending "down to −90 dB" across a stated frequency range. Exponent has interpreted −90 dB as −90 dBsm, which is a measure of Radar Cross Section, or the effective "size" (as seen by a radar system) of a target object on the test range. In the type of testing described by NGSC, the radar returns of a target object must be discerned against a background of objects such as hills, rocks, birds, rain, vehicles and distant structures.

To put the numbers in context, −90dBsm is roughly equivalent to a metallic object that is 1/1,000,000,000th of a square meter in area. A small piece of an insect's anatomy on the Range 1 test stand would produce such a clutter level. In our opinion, −90dBsm is a best-case sensitivity for Range 1 that is applicable for only a limited range of radar parameters, assumes low winds and other favorable testing conditions, and is achieved only by means of integration or similar signal-processing techniques.

NGSC has not provided sufficient information to perform detailed clutter analysis for the particular operating parameters of the Tejon Test Facility, nor has NGSC disclosed the methods, parameters or assumptions used to justify its position relative to AVSR. In the absence such information, Exponent has conservatively calculated returns from AVSR by considering 42 reasonable combinations of estimated radar parameters. Radar returns were calculated by considering the radar cross sections (RCS) and physical locations of solar panels comprising AVSR.

Based on these calculations, AVSR:

(a) will not contribute to clutter for numerous values of radar pulse-repetition frequency; and

(b) possesses a clutter signature that, for all estimated Range 1 radar parameters, is below the stated sensitivity of the Tejon Test Facility.

The findings presented herein are made to a reasonable degree of engineering and scientific certainty. In the analysis, we have relied on radar parameters found in an August 27, 2010, NGSC letter to Kern County and in NGSC documents that are part of the PdV Wind Energy record. Exponent cannot verify the correctness of all these data, and relies on NGSC's statements to accurately reflect present conditions at the Tejon Test Facility. We have made every effort to accurately and completely investigate all areas of concern identified during our investigation.

Introduction

Radar systems work by sending out pulses of electromagnetic energy through a highly directional antenna. These pulses propagate from the radar through the atmosphere and small amounts of energy are reflected back by targets and clutter. Targets are objects that the radar is trying to detect or characterize (such as aircraft) and clutter includes unwanted returns from objects other than a target. The radar receives the reflected energy and attempts to either identify targets among the clutter (in the case of a detection problem) or accurately measure the return (in the case of a radar-cross-section measurement problem).

Radar Cross Section Radar cross section (RCS) is a measure of an object's ability to scatter incident electromagnetic field radiation in the direction of a receiver and is defined as the ratio of power scattered by a distant object relative to the incident power illuminating the object:

$$\sigma = \lim_{r \to \infty} 4\pi r^2 \frac{|E_s|^2}{|E_i|^2} \qquad (1)$$

Where r is the distance from the antenna to the object, E_s is the scattered electric field measured at the receiving antenna, and E_i is the incident electric field on the target. The radar cross section is normalized such that it is a function of object geometry, incident wave angle, material properties of the scattering object, wave polarization and excitation frequency. In general, the radar cross section is not the same as the physical size of the scattering object. For instance, adding radar-absorbing material to an object will decrease the amount of scattered energy directed back to the receiver, effectively decreasing its RCS relative to the same object without absorbing material. So too, faceted surfaces that reflect incident radiation away from the source decrease the RCS compared to surfaces that are perpendicular to incident radiation. These are among the commonly used techniques to minimize RCS. Radar cross sections can vary by orders of magnitude. As such, the RCS is commonly converted to a logarithmic scale using the following relation:

$$\sigma_{dBsm} = 10\log_{10}\left(\frac{\sigma_{m^2}}{1_{m^2}}\right) \quad (2)$$

The radar cross section in dBsm is referenced to an object $1m^2$ in size. RCS values for various objects are listed in Table 1. Every RCS shift of -10 dBsm corresponds to a factor of 10 decrease in RCS. For instance, an insect with 1/1000th the RCS of a human body has an RCS that is 30 dBsm less that the RCS of a human body.

Table 1. Examples of objects and their corresponding RCS[1]

Object	RCS (m^2)	RCS (dBsm)
Cargo Ship	10,000	40
Large Airliner	100	20
Small Aircraft	5	7
Human Body	1	0
Locust	0.001	-30

Antenna Radiation Pattern The transmitting and receiving characteristics of antennas are, in part, governed by geometry and excitation frequency among other factors. For example, a parabolic dish antenna will direct most of its power parallel to the axis of revolution about the center of the dish, and the degree of focusing or directivity for a given antenna is determined by the frequency of operation. As a result, an antenna will transmit only a small fraction of its supplied power to distant objects located at off-angle directions relative to the antenna's main lobe or boresight. Reciprocity dictates that a given antenna will transmit and receive in an identical fashion. Thus, distant objects that do not lie within the main lobe of the antenna's radiation pattern will scatter and return (as determined by RCS) a much weaker signal than one that lies within the antenna's boresight (direction at which the antenna is effectively pointed). Figure 1 is a plot of the power pattern of a parabolic dish antenna at two distinct frequencies. As seen in Figure 1, higher frequencies (smaller wavelengths) exhibit a larger angular dependence in power pattern. Therefore, the ratio of the gain of the main lobe (centered at zero degrees) to the gain of any side lobe is larger at higher radar frequencies than at lower frequencies. For example, in Figure 1, the ratio between the main lobe gain and the chosen side lobe gain is approximately 47 dB for a frequency of 6 GHz, whereas for a frequency of 2 GHz, the ratio between the main lobe gain and the chosen side lobe gain is only approximately 33 dB.

[1] Knott, Eugene F., "Radar Handbook: Radar Cross Section", McGraw-Hill, 2008.

This phenomenon is due to the increase in phase variation of the fields across the aperture of the antenna.

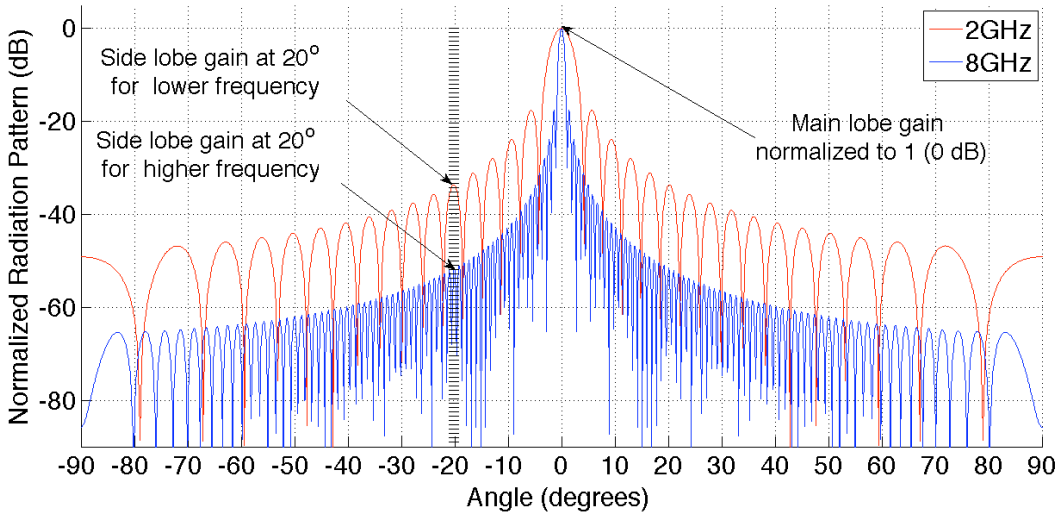


Figure 1. Plot of normalized radiation pattern in dB for a parabolic antenna, 8 feet in diameter, as a function of angle with respect to antenna boresight, for two operating frequencies.

Radar Equation The role of RCS in characterizing the received signal strength for a given transmitter-receiver pair is best explained by means of the radar equation. The monostatic radar equation (in which transmitter and receiver are collocated) is defined as:

$$P_r = P_t \frac{G_t \sigma A_r}{(4\pi)^2 r^4} \qquad (3)$$

Where P_r and P_t are the received and transmit power respectively, G_t is the gain of the transmitting antenna, σ is the radar cross section of the scattering object, A_r is the aperture of the receiving antenna, and r is the distance (also referred to as the range) to the object from the transmitter/receiver.

It can be seen by examination of the radar equation that for a given object with RCS of σ, the power at the receiver, assuming all other variables are constant, varies as the 4^{th} power of range. Thus, an object with given RCS will have a radar return echo that carries 16 times less power when the distance from the object to the transmitter/receiver increases by 2 times. Generally, an object with substantially larger RCS that is placed much further from the transmitter/receiver can exhibit the same received signal strength as an object with small RCS that is placed much closer to the transmitter/receiver. Additional factors can be included in the monostatic radar equation to account for multipath terrain-dependent (e.g., reflection and/or diffraction from surrounding objects) and medium dependent (e.g., atmospheric) losses. These factors are not included in the above formulation for far-afield clutter since their effect is second order.

Range gate and pulse repetition frequency Radars transmit each pulse at the carrier frequency f during transmit time, wait for returning echoes during listening or rest-time, and then radiate the next pulse. The time between the beginning of one pulse and the start of the next pulse is called pulse repetition time (PRT) and is equal to the reciprocal of the pulse repetition frequency (PRF):

$$PRF = \frac{1}{PRT} = \frac{c_0}{2 \times d} \qquad (4)$$

In the equation above, d is the spatial period corresponding to the physical distance between successive pulses traveling away from the radar, and c_0 is the speed of light. The quantity d is often called the maximum unambiguous range, which for a fixed PRF corresponds to the maximum distance an object can be placed from the radar such that the return time can be used to uniquely determine the actual distance of that object from the radar. The range gate (RG) shortens the listening time of the radar, such that only radar returns arriving within a certain time period during each pulse repetition time are considered. Range gating results in the consideration of radar returns from a much smaller area than the maximum unambiguous range.

When plotted on a map for a given PRF and RG, the areas surrounding the antenna that contribute to all radar returns consist of a series of concentric rings, of thickness given by RG, and of ring separation distance d (maximum unambiguous range)[2]. Neglecting the influence of multipath interference, areas surrounding the antenna that do not fall within this range-gated area, as defined by a given PRF and RG, are effectively invisible to the antenna because the radar returns do not arrive when the antenna is listening (i.e. when the range gate is "open").

Northrop Grumman Site

Specific information regarding Northrop Grumman's Tejon Test Facility was obtained from publicly available aerial photographs and NGSC's November 1, 2007 letter regarding the PdV Wind Energy Project.[3] The Tejon Test Facility has two ranges for measuring radar cross section (RCS) of test targets. An overview of both ranges is shown in Figure 2, where "Range 1" is visible as the longer oblong region to the south, and "Range 2" is the shorter oblong region to the north. The region extending southeast from "Range 1" (the "Range 1 Keyhole") is specifically mentioned in an August 27, 2010 letter from NGSC to the Kern County Planning Department as a region sensitive to the placement of reflecting objects. Figure 3 is a detailed aerial image of the test facility in which four RCS test antennae are circled. Since only the left two antennae shown in Figure 4 are identified by Northrop Grumman as corresponding to Range 1, the analysis presented in this report only considers the effects of these two antennae. We have estimated that the Range 1 antennae, the smaller antennae of those visible at the Tejon Test Facility, collectively operate at frequencies between 2 and 18 GHz (see Appendix A).

[2] See Figure 8 for graphical representation of RG width and d.

[3] November 1, 2007 letter to Anne E. Mudge, Esq, Cox, Castle & Nicholson LLP, Re: "Impact of PdV Wind Energy Project 'Scenario' on Northrop Grumman Tejon Test Facility.

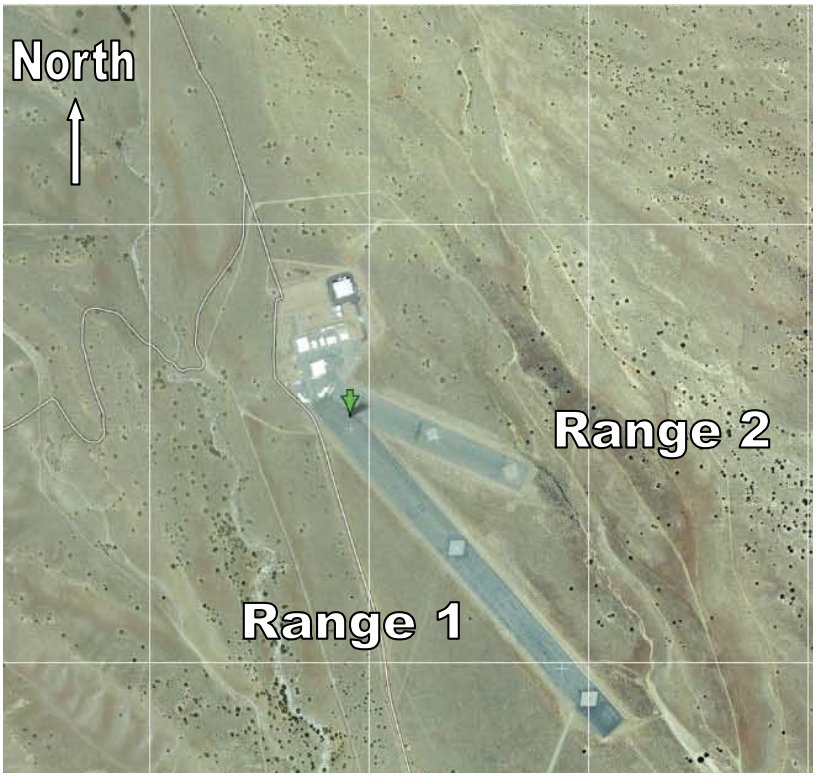


Figure 2. Plan view of Tejon test facility from Google Earth 09/21/2010. The approximate latitude is 34.927° and longitude is -118.532°.

Figure 3. Enlarged image of Figure 1 showing dish antennae encircled.

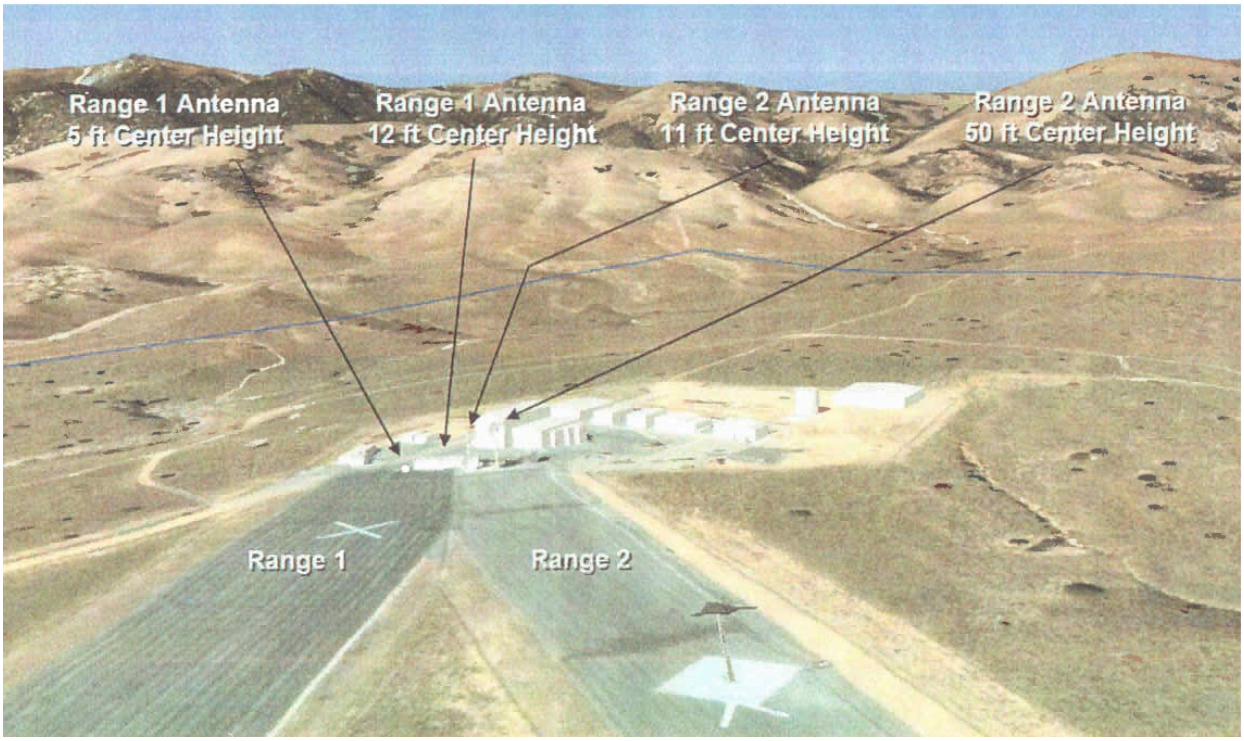


Figure 4. View of Ranges 1 and 2, image from Northrop Grumman. The Range 1 antennae, referred to in this report as A1 and A2, from left, were assumed to have respective dish diameters of 8 feet and 5 feet, respectively.

As can be seen in Figure 4, test targets (such as scale models of aircraft) are placed on downrange supports in one of two locations on either test range. Radar returns from test targets are used to characterize the targets in terms of their radar cross section (RCS). Objects that reflect little incident radiation (in the direction of radar) when illuminated by the test beam have a lower RCS and are more difficult to detect. There are two important observations regarding NGSC's −90 dBsm noise floor:

1. NGSC has not provided information necessary to express the radar return from distant objects in terms of the sensitivity of the Tejon Test Facility, *viz*, the identity of the test-range antenna, test-stand location, operating frequency, pulse-repetition frequency, and range-gate size.
2. NGSC has not provided any justification that the −90 dBsm noise floor is achievable in an outdoor range. A −90 dBsm value for the radar cross section corresponds to 1/1,000,000,000 m^2, or the area subtended by a fraction of an insect's anatomy, and is more difficult to achieve in an outdoor environment than in an indoor range.

Indoor and outdoor ranges

With any type of RCS measurement range, it is desirable to locate the target far enough from the transmitter so that the incident wavefront is planar with constant phase across the entire target. Outdoor ranges can more readily satisfy this requirement since practical separations are much larger than for indoor ranges. Unlike indoor ranges, however, outdoor ranges are subject to a

number of factors that limit their sensitivity levels, including weather and environmental conditions (IEEE Std 1502 – 2007). Wind is a "major concern" at many outdoor ranges located in desert regions, and wind speeds of 10 m/s can stop RCS measurements.[4] Dust accumulating on the surface of components will change their radar scattering properties.[5] If security is a concern, outdoor ranges can preclude measurement of very sensitive targets.

In addition to environmental factors, RCS measurements taken outdoors must take into account ground-plane effects and must satisfy accurate height and frequency constraints to maintain proper phase relationships of the direct and ground-reflected signals at the target location. A thin layer of pavement is used to provide a smooth ground plane and prevent vegetation from growing along the direction of the antenna boresight. Even so, it is difficult to eliminate all naturally occurring sources of clutter in the terrain surrounding an outdoor RCS measurement range. In outdoor facilities, certain techniques to mitigate the effects of clutter, such as background or "coherent" subtraction, are only effective for long wavelength (low frequency) RCS measurements.[6]

With these sensitivity constraints, outdoor ranges are more suited to RCS measurements of larger targets, as opposed to indoor ranges that are more immune to the factors listed above.

Antelope Valley Solar Ranch

As shown in Figure 5, the Antelope Valley Solar Ranch is located more than 10 miles (16.4 kilometers) to the southeast of the Tejon Test Facility. The site covers about 3.25 square miles (see Figure 7) and includes a 7-foot tall chain link perimeter fence topped with barbed wire.

[4] Knott, Eugene F., Radar Cross Section. Second Edition. SciTech Publishing, Inc. 2004.

[5] Ibid.

[6] IEEE Std 1502-2007 IEEE Recommended Practice for Radar Cross-Section Test Procedures

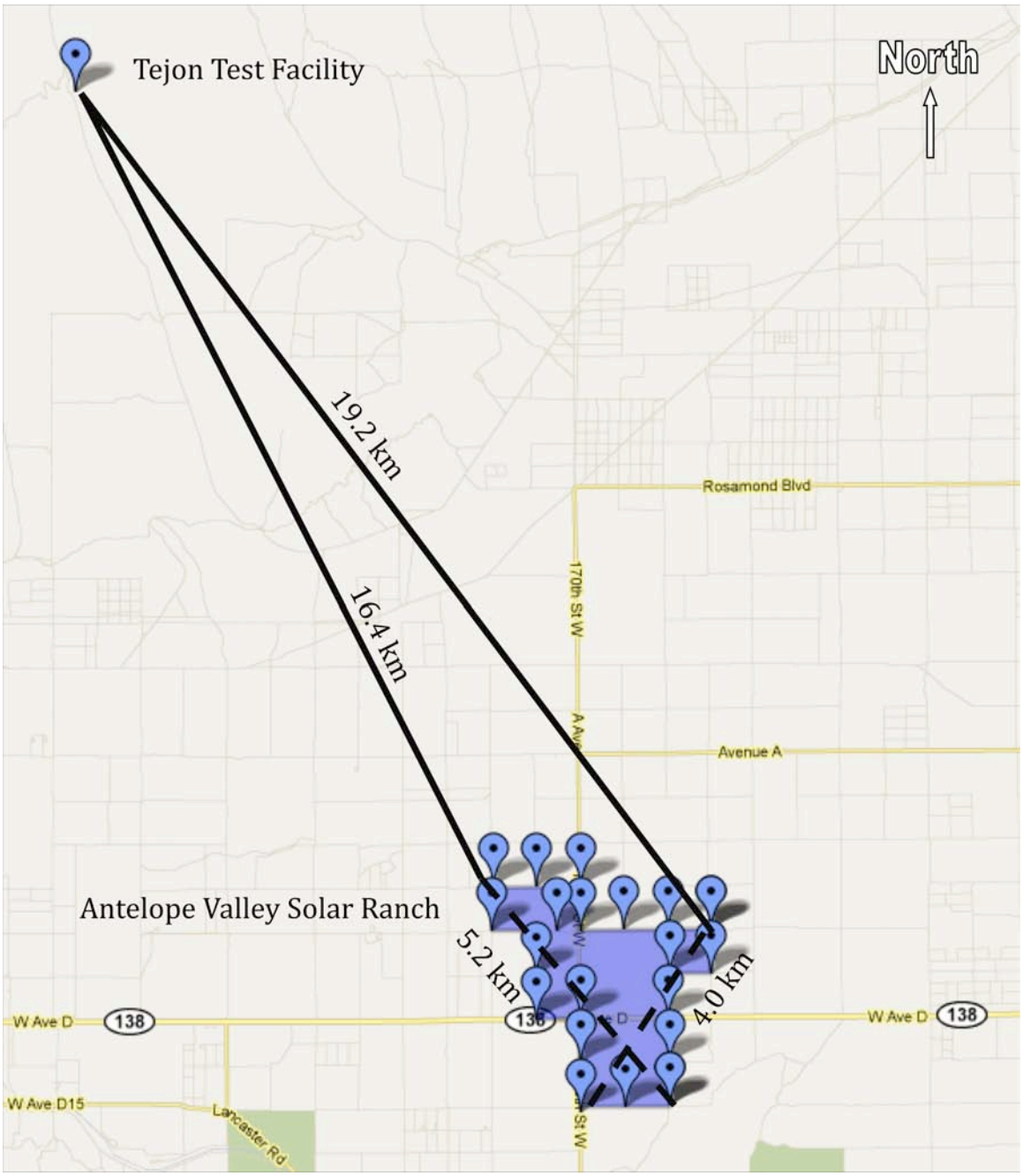


Figure 5. Relative locations of the Tejon Test facility (upper left, northwest corner of map) and the Antelope Valley Solar Ranch (shaded area).

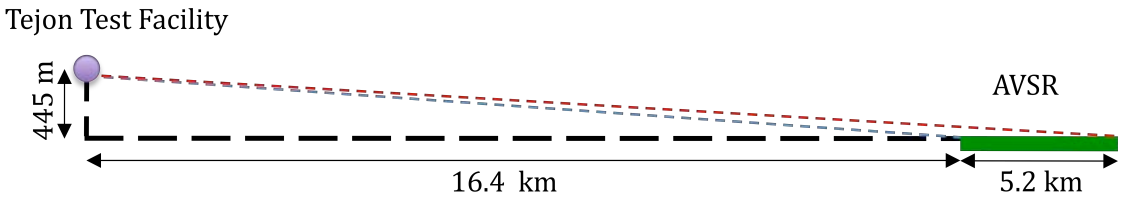


Figure 6. Average relative elevation of the Tejon Test facility to the Antelope Valley Solar Ranch. Distance from closest edge of AVSR to Tejon Test Facility and the maximum width of AVSR are indicated.

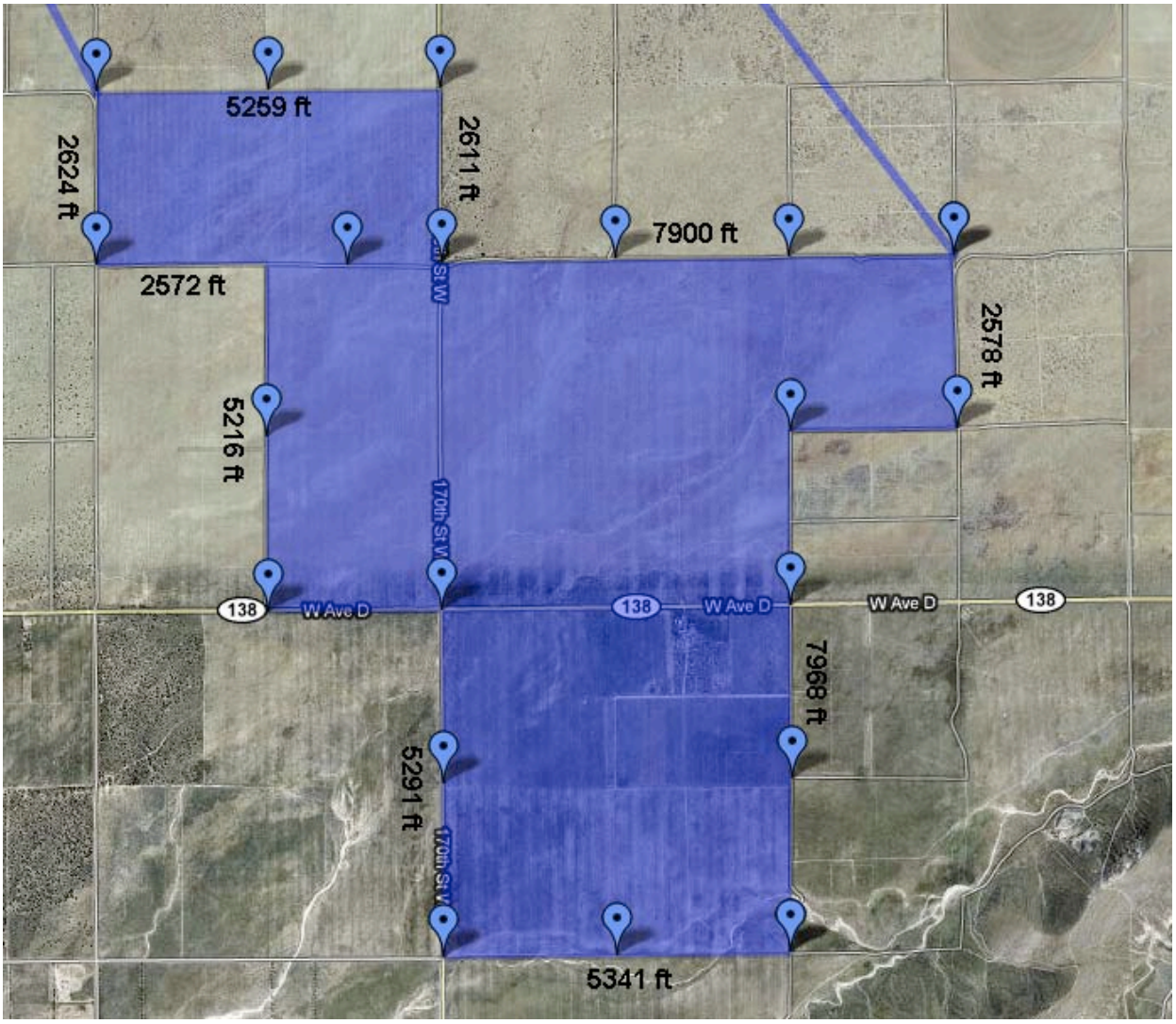


Figure 7. Outline of the Antelope Valley Solar Ranch including external dimensions.

The solar field will consist of PV panels mounted on steel support structures. The supports will be either fixed or pivoting. The assembled fixed tilt PV panels will have a typical height of about 6 feet and the tracking panels will have a maximum height of 8 feet. The PV panels will

be arranged in rows with center-to-center spacing from 14 feet for fixed tilt panels and 16 feet for tracking panels. In the case of fixed supports, the arrays will be laid out in blocks approximately 400 feet in the north-south direction and 360 feet in the east-west direction, with rows aligned east to west, and PV panels will be tilted 25 degrees to the south. In the case of pivoting supports (tracking arrays), arrays will be laid out in blocks approximately 500 feet in the north-south direction and 300 feet in the east-west direction, with rows aligned north to south. The PV panels in the tracking arrays will pivot, tracking the sun, east to west. Single-axis trackers have no southward tilt, and typical trackers are capable of pivoting to within a 45° tilt toward the east and west horizons. To minimize shadowing, typical tracking array designs support "backtrack," lying nearly flat in the afternoon as the sun's western elevation decreases below 45°. For these designs, the panels lay flat overnight until approximately 9 A.M. in the morning, when the sun's eastern elevation increases above 45°. The panels then pivot about their north-south axis to face the sun, moving slowly toward the west over the course of the day. Approximately 75 percent of the solar field is proposed fixed tilt arrays, and the balance for horizontal single-axis trackers.

Photovoltaic cells convert sunlight directly into electricity and are made from semiconductor materials. Traditional solar panels arrange together cells made of wafers sliced from ingots of crystalline silicon. Thin-film solar panels use a thin, flexible layer treated with semiconductor material protected by sheets of glass. PV panels have multiple cells with negative (sunny side) and positive (dark side) layers. Conductors on the sunny-side layer typically comprise metal "fingers," the shape of which is optimized to minimize the shadowed area while providing a low-resistance path for current to flow between the layers. Metallization near the dark-side layer comprises a continuous layer of metal, metal paste, or other conductor. Typically, a large number of individual PV devices are electrically connected to form a single PV panel, along with associated electronics such as bypass diodes and non-conductive packaging.

The current design includes 185 conversion stations throughout the Antelope Valley Solar Ranch site, each containing two inverters and one medium voltage transformer. Each conversion station will be approximately 12 feet wide by 35 feet long by 10 feet high. The majority of the proposed 34.5-kV transmission lines (approximately 3 miles on the project site) would be underground, with above-ground crossings planned for crossings at 170th Street West and to cross jurisdictional drainages. The Antelope Valley Solar Ranch will also contain a single operations and maintenance (O&M) building. The footprint for the most likely design of the operations building is approximately 30 feet wide by 84 feet long, with a height of approximately 10 feet. The O&M building will be a pre-engineered metal building.

Methods

Due to the majority of the Antelope Valley Solar Ranch being occupied by fixed-tilt arrays, the results presented here were calculated assuming that the entire area within the boundaries of the site (see Figure 7) was covered by the fixed-tilt arrays described above.

Published RCS measurements of terrestrial solar panels could not be located, and NGSC has not communicated its basis for assuming a particular RCS for the Antelope Valley Solar Ranch.

Since the PV panels comprise numerous flat conductive surfaces, the radar cross-section of the Antelope Valley Solar Ranch was estimated using RCS expressions for multiple canted planes.[7]

The Antelope Valley Solar Ranch was divided into 10 meter by 10 meter square bins (see Figure 8), and the power reflected back from each bin given a 1 W transmitted radar pulse was calculated using the radar equation. The contributions from each bin were then summed to obtain a total returned power estimate for the Antelope Valley Solar Ranch, which was compared to the returned power from an object under test within the Tejon Test Facility having a radar cross section of −90 dBsm. It should be noted that the 1W transmitted power is a normalized quantity and that the results can be scaled to the actual known transmitter power.

Range gate and pulse repetition frequency The width of the range gate and the pulse repetition frequency (PRF) determine which areas within the Antelope Valley Solar Ranch contributed to the total returned power, and thus which bins to consider for our calculation. A range gate of 50 m wide was assumed for all calculations. A choice of PRF and range gate determines the radii and thickness of concentric rings that define the range-gated area, that is, the locations from which the antenna receives radar reflections (see Figure 8). For certain values of pulse repetition frequency, plotted in the Results section below, we found that no range-gated areas overlapped with the Antelope Valley Solar Ranch. For other values of PRF, we identified the bins that fell within the range-gated areas and included these bins in our calculation of the total returned power. The range-gated regions of the Antelope Valley Solar Ranch for several values of PRF are plotted in Appendix B.

[7] Solar array panels are modeled as perfectly reflecting plates in the following publications:

Hwu, S.U. Johnson, L.A. Elmore, J.D. Lu, B.P. Fournet, J.S. Panneton, R.J. Ngo, J.C. Arndt, G.D. Bourgeois, B.A. , "Space station Ku-band antenna performance degradation due to solar panel scattering interference," Global Telecommunications Conference, 1994. GLOBECOM '94. pp. 1346 - 1350 vol.3

Hwu, S.U. Lu, B.P. Johnson, L.A. Fournet, J.S. Panneton, R.J. Arndt, G.D., "Scattering Properties of Solar Panels for Antenna Pattern Analysis," Antennas and Propagation Society International Symposium, 1994, pp. 266 - 269 vol.1

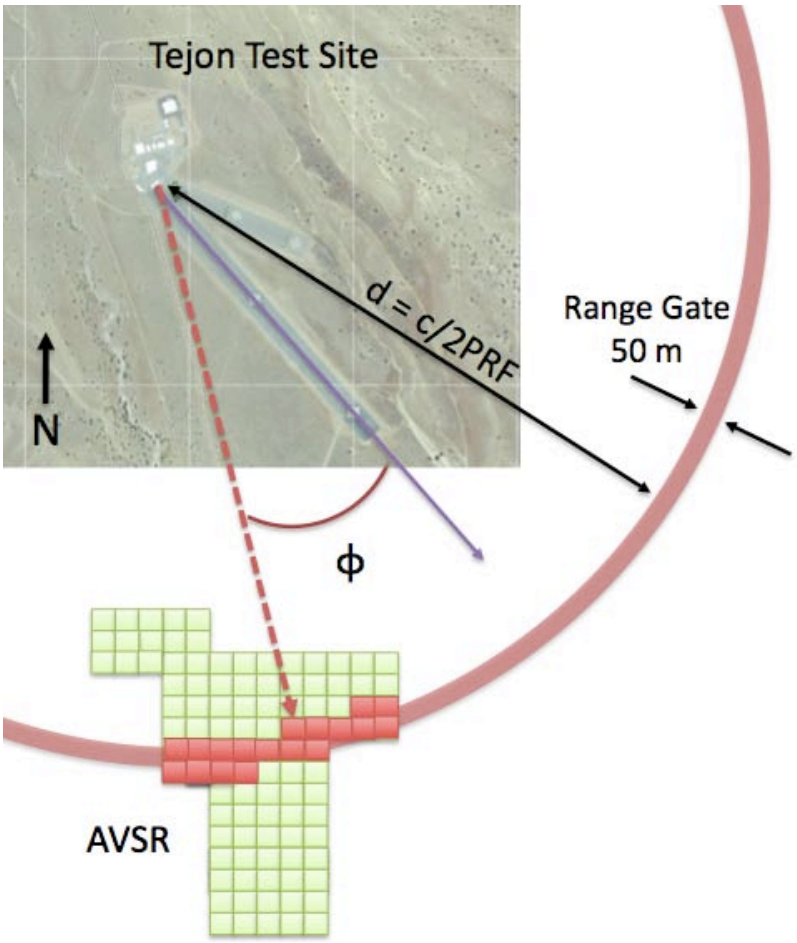


Figure 8. Schematic of model (not to scale) used to calculate total reflected power from the Antelope Valley Solar Ranch. The angles ϕ_1 and ϕ_2 respectively are between the boresight of a particular antenna (purple solid arrows, assumed to be along the axis of a test range) and the location of a particular bin (dashed red arrow).

Radar cross section The equivalent radar cross section (RCS) was calculated for each bin that was identified to be within the range gated region. Depending on the size chosen (10 m x 10 m square in this case), each bin may contain sections of multiple rows of solar panels. Fixed-tilt arrays were assumed to be arranged in parallel in east-west rows, with a maximum solar panel tilt angle of $\beta = 25°$ southward about the east-west axis. The rows of panels were assumed to have a center-to-center separation of s. The RCS, σ, for a given solar panel section residing in a particular bin was approximated as that of a conductive rectangular plate with a width w and length l, using the equation below, where ϕ is the angle between the plane containing the line of sight and the edge of the rectangle of length l, and θ is the angle between the surface normal of the rectangular plate and the direction from the given bin to the antenna.[8]

[8] Knott, Eugene F., "Radar Handbook: Radar Cross Section", McGraw-Hill, 2008.

$$\sigma = 4\pi\left(\frac{A\cos\theta}{\lambda}\frac{\sin(kl\sin\theta\cos\phi)}{kl\sin\theta\cos\phi}\frac{\sin(kw\sin\theta\sin\phi)}{kl\sin\theta\sin\phi}\right)^2 \qquad (5)$$

For sufficiently small values of θ and appropriate choice of s, a fraction of each panel would be obscured by the adjacent panels, and the unobscured width of each panel could be represented by some value, w´. As a conservative modeling assumption, the entire width w of each panel was used in RCS calculations. Due to changes in ϕ and θ due to the locations of different bins, the radar cross section of panels varies across the Antelope Valley Solar Ranch.

Antenna Radiation Pattern The angle between the antenna boresight and the location vector (direction from the antenna site to a given bin location) was calculated for each bin within the range gated area. This angle was used to compute the normalized radiation pattern factor for each bin, as described above. This factor was included in the antenna gain and describes the fraction from the maximum antenna power transmitted to and received from a given bin due to the directionality of the antenna. As shown in Figure 1, higher radar operating frequencies result in a narrower radiation pattern and thus less power transmitted to and from bins at locations off-angle from the antenna boresight. The normalized radiation pattern for each antenna is plotted in Appendix A.

Additional Assumptions The resulting model incorporates several additional assumptions to calculate the total returned power of the facility:

(1) No terrain shielding was assumed. Our examination of terrain elevation data[9] indicates that a ridge approximately midway between the two sites may partially obscure the Antelope Valley Solar Ranch from the Tejon Test facility.

(2) Constructive/destructive interference patterns via superposition of reflected electromagnetic fields from each bin were not considered. Our calculations represent an upper bound to any effect of interference, as we assume that the total returned power is simply the sum from all bins. Considering interference effects would only decrease the total returned power.

(3) Electromagnetic coupling between individual elements of the solar array was not considered.

(4) Atmospheric loss was not considered. For the highest radar frequencies we have considered (18 GHz), losses due to atmospheric attenuation will be approximately 0.1 dB/km, or a loss of at least 3.2 dB per round trip[10] between an antenna and the Antelope Valley Solar Ranch. For adverse weather conditions (moderate rain, heavy fog, dust),

[9] USGS data, aggregated at http://www.heywhatsthat.com/profiler.html

[10] An attenuation of 3 dB means that the signal is reduced to 50% of the original signal strength. Thus, atmospheric conditions cause the signal to be reduced by more than half of the original signal.

the additional loss/km can be as high as another 0.1 dB/km (at least 3.2 dB per round trip) at the highest frequencies.[11]

(5) Geometrical optics was used to calculate the RCS. This approximation is less accurate at the low range of the radar frequencies we have considered (150 MHz).

(6) Surface roughness and absorption by the materials on the solar panel surface are not expected to contribute significantly to RCS, and thus these effects were not considered.

(7) Multipath returns, caused by radar pulses reflecting off multiple surfaces between transmission and reception, were not considered in this analysis. Multipath returns would increase the total reflected power, as reflections from a bin outside a given range gate would be received as a result of an increased path length. However, the terrain appears unfavorable to multipath, due to the presence of a ridge approximately midway between the two sites that may partially obscure the Antelope Valley Solar Ranch from the Tejon Test facility.[12]

(8) For fixed-tilt arrays arranged in east-west rows, the planned Antelope Valley Solar Ranch does not have edges perpendicular to the radar line of sight. In this case, the returns from a canted plate can still contain reflections from plate corners.[13] To account for these reflections from solar panel corners that will be illuminated by the gated radar signal, and to account for panel racking and support members, we increased the RCS of each bin comprising the Antelope Valley Solar Ranch by 100 times.

[11] Adamy, David L. “Tactical Battlefield Communications Electronic Warfare”, Artech House, 2009.

[12] USGS data, aggregated at http://www.heywhatsthat.com/profiler.html

[13] Knott, Eugene F., "Radar Cross Section.” Second Edition. SciTech Publishing, Inc., 2004, p.8.

Results

Based on a range of operating frequencies (assumed for each antenna) and PRF, Exponent calculated a range of the total reflected power from the Antelope Valley Solar Ranch. Of particular importance are several values of PRF for which our model predicts that no significant power will be reflected back to the radar from the Antelope Valley Solar Ranch. For values of PRF less than approximately 7.1 kHz, and at bands shown in Figure 9, our model predicts that no significant part of the Antelope Valley Solar Ranch lies within a 50 meter wide range gate at the unambiguous range defined by each PRF, and thus no significant radar power will be reflected from the Antelope Valley Solar Ranch.

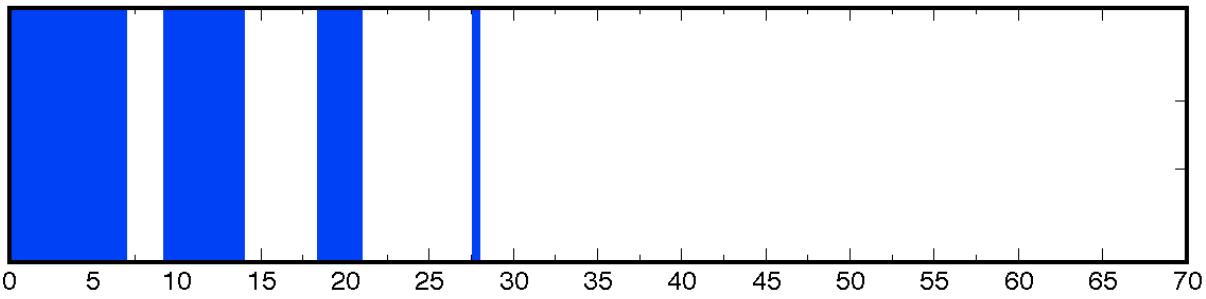


Figure 9. Plot of pulse repetition frequencies that result in negligible reflected radar power from the Antelope Valley Solar Range. Shaded areas indicate the values of PRF for which there is no overlap between a 50 meter wide range gate and the Antelope Valley Solar Ranch site, resulting in negligible reflected power.

For other choices of PRF, the total reflected power from the area of the Antelope Valley Solar Ranch within a 50 m range gate was calculated using the method described above and compared to the reflected power from a test object, mounted on a test pylon on the test range, having a −90 dBsm radar cross section. The plots of returned power from the Antelope Valley Solar Ranch for each antenna over a range of assumed operating frequencies are provided in Appendix C. Depending on the choice of operating frequency and antenna parameters, our calculations indicate that the total reflected power from the Antelope Valley Solar Ranch is in all cases less in magnitude than that of a test object having a −90 dBsm radar cross section mounted on a test pylon down range from the Range 1 antennas at the Tejon Test Facility.

Conclusion

Given the estimated radar parameters of NGSC's Tejon Test Facility and the model for calculating the RCS of solar panels presented above,

(a) The Antelope Valley Solar Ranch does not contribute to clutter for numerous values of radar pulse-repetition frequency; and
(b) for all the Range 1 radar parameters considered, the Antelope Valley Solar Ranch possesses a clutter signature below the Tejon Test Facility sensitivity threshold, indistinguishable from current ambient noise sources.

A properly chosen pulse repetition frequency will render the Antelope Valley Solar Ranch essentially invisible to radar pulses transmitted by the Tejon Test Facility. For additional combinations of pulse repetition frequency and radar operating frequency, the calculated return power from the Antelope Valley Solar Ranch is below −90 dBsm when referred to the test-range sensitivity.

Appendix A: Normalized Radiation Patterns

Exponent calculated the normalized radiation pattern for each of the four antennas identified at the Tejon Test Facility, based on assumptions about the antenna diameter, the parabolic shape of the antenna, and the relevant frequency ranges used by each antenna[14]. The maximum and minimum frequency for each antenna is presented in Figure 10 and Figure 11. The range of angles with respect to the antenna boresight that the Antelope Valley Solar Ranch occupies is highlighted, approximately 4 to 14 degrees for antennas directed down Range 1.

Table 2. Antenna parameters used in radar return calculations. Range 1 is the southern range.

Antenna	Diameter	Coordinates	Height	Frequency	Range
A1	2.4 m	34.927370, -118.532504	1.5 m	2 – 8 GHz	Range 1
A2	1.5 m	34.927392, -118.532468	3.7 m	6 – 18 GHz	Range 1
A3	4.0 m	34.927488, -118.532178	3.4 m	0.5 – 4 GHz	Range 2
A4	6.1 m	34.927598, -118.532178	15.2 m	0.15 – 1 GHz	Range 2

[14] Kraus, John D. "Antennas." Second Edition. McGraw-Hill, 1988.

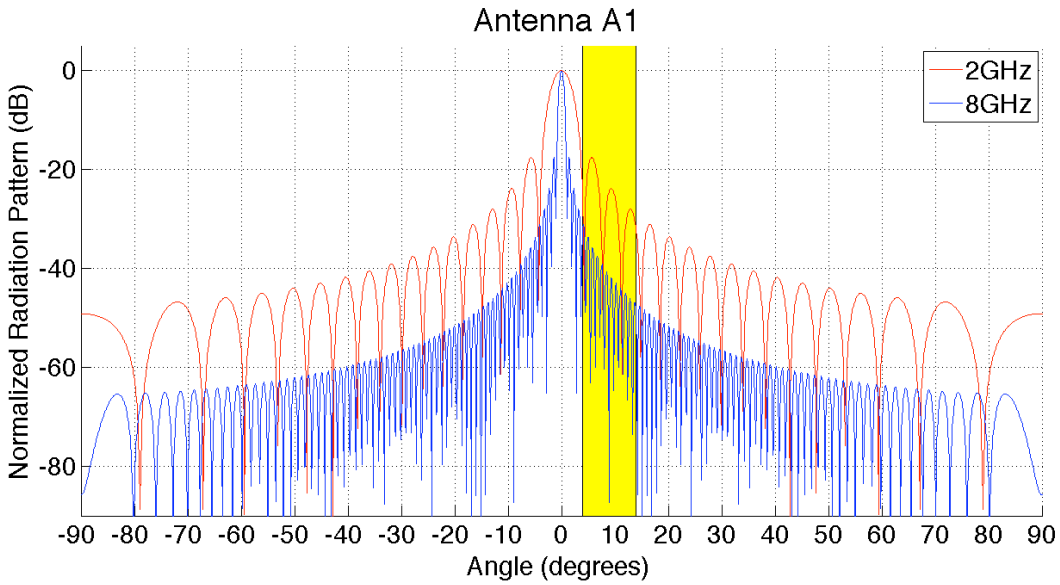


Figure 10. Normalized radiation pattern for antenna A1 for maximum (8 GHz) and minimum (2 GHz) assumed operating frequencies. Approximate angles corresponding to Antelope Valley Solar Ranch are shown in shaded region.

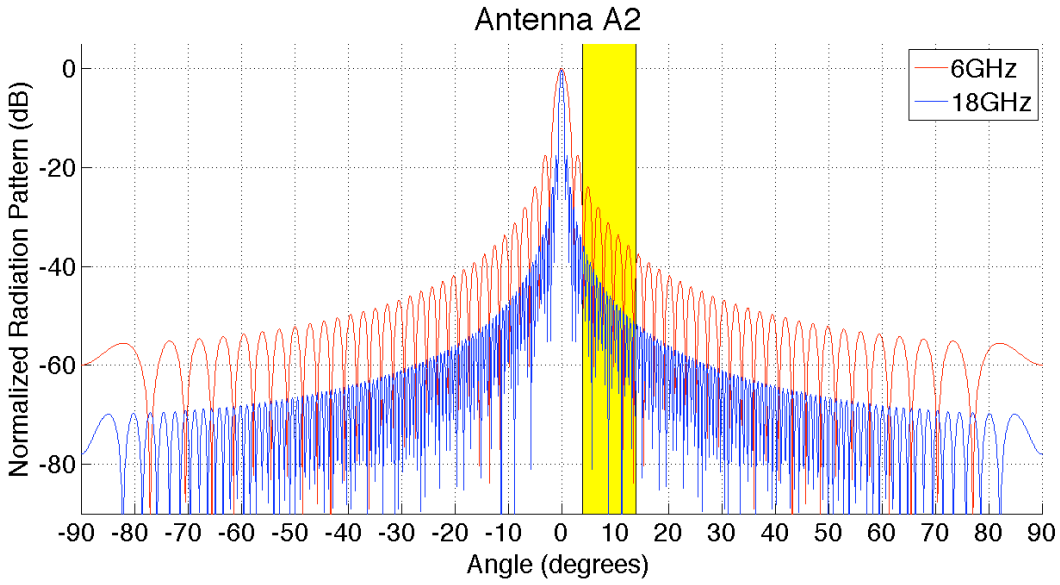


Figure 11. Normalized radiation pattern for antenna A2 for maximum (18 GHz) and minimum (6 GHz) assumed operating frequencies. Approximate angles corresponding to Antelope Valley Solar Ranch are shown in shaded region.

Appendix B: Range Gated Regions

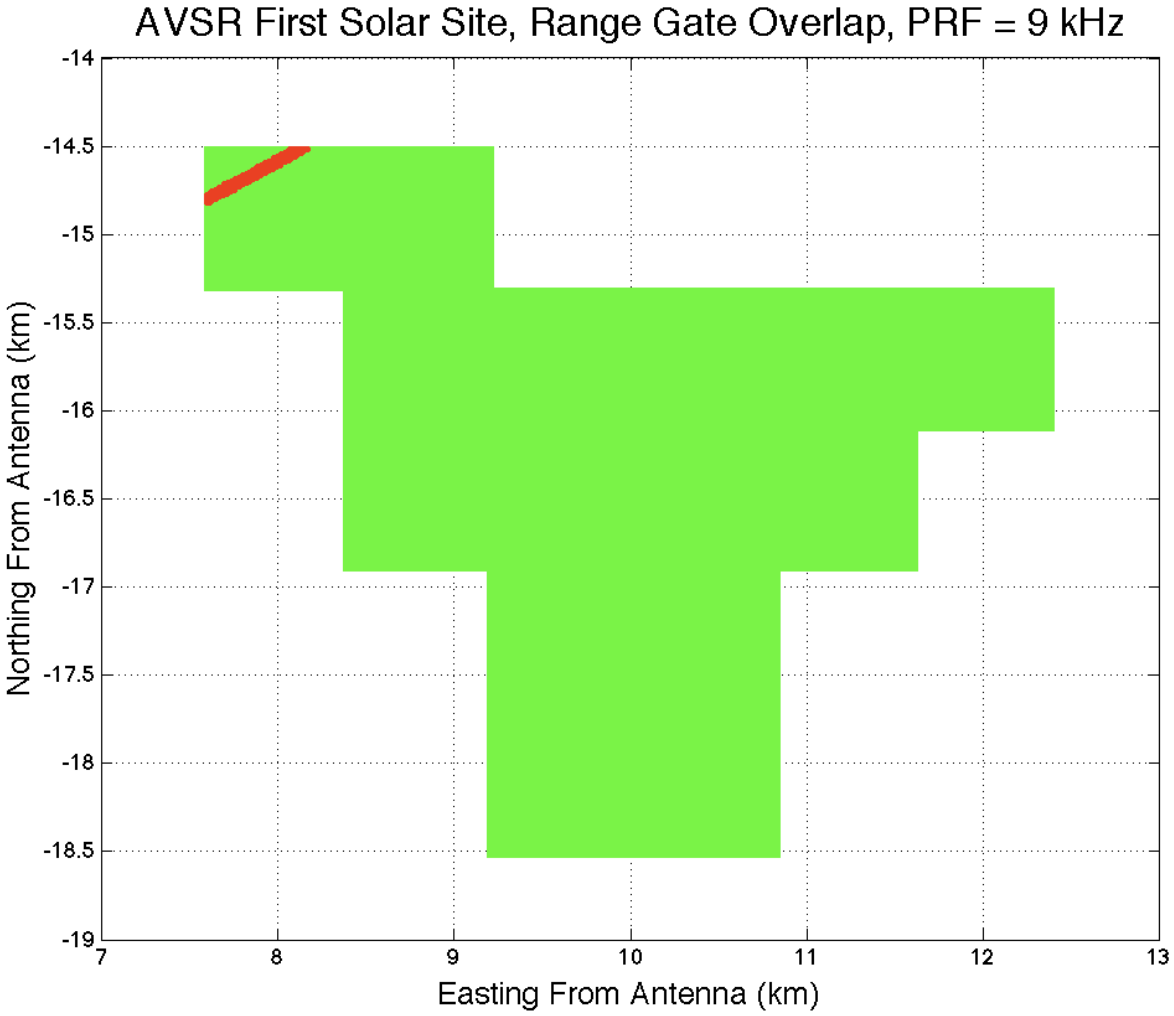


Figure 12. Plot of Antelope Valley Solar Ranch (green shape) indicating the location of the range-gated bins (red stripes) for a range gate width of 50 m and a pulse repetition frequency of 9 kHz (range gate width not to scale for illustration purposes).

Figure 13. Plot of Antelope Valley Solar Ranch (green shape) indicating the location of the range-gated bins (red stripes) for a range gate width of 50 m and a pulse repetition frequency of 150 kHz (range gate width not to scale for illustration purposes).

Figure 14. Plot of Antelope Valley Solar Ranch (green shape) indicating the location of the range-gated bins (red stripes) for a range gate width of 50 m and a pulse repetition frequency of 300 kHz (range gate width not to scale for illustration purposes).

Appendix C: Returned Power Comparisons

Exponent calculated the returned power from the Antelope Valley Solar Ranch for several values of PRF for which a significant area of the site falls within the range gated area, as determined by the pulse repetition frequency and assumed range gate width of 50 m. Calculations were performed for each of the two antennas at the Tejon Test Facility identified by Northrop Grumman as corresponding to Range 1, and based on the assumptions previously outlined. The solar panels were assumed to have a width of 2.54 meters, a row separation of 4.23 meters, and a southward tilt of 25° with respect to horizontal. Normalized return power (dB) and range-referred clutter level (dBsm) are presented in Figure 15 and Figure 16.

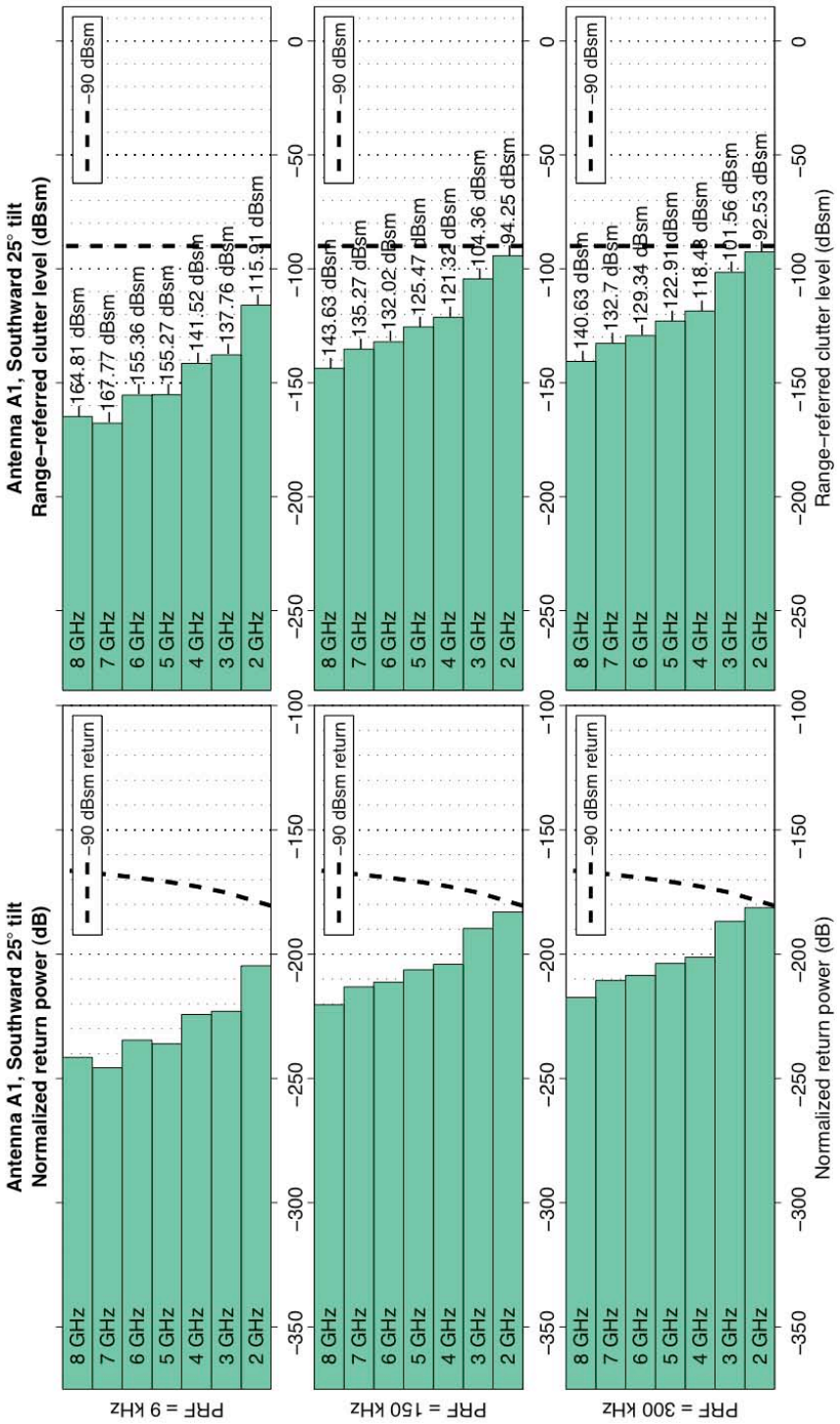


Figure 15. Antenna A1, normalized return power (dB) and range-referred clutter level (dBsm) for 25° tilt.

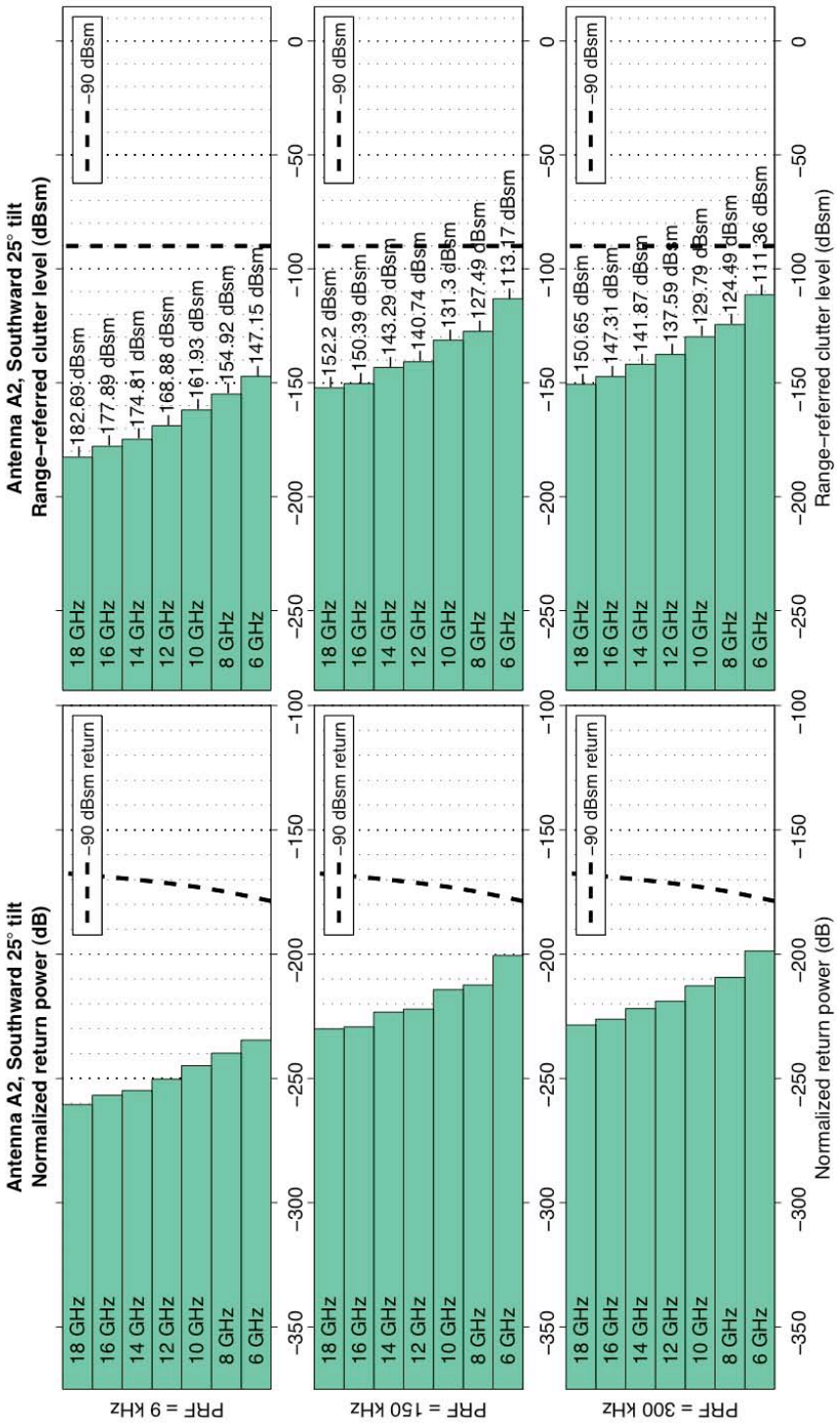


Figure 16. Antenna A2, normalized return power (dB) and range-referred clutter level (dBsm) for 25° tilt.

FINDINGS OF FACT
REGARDING THE FINAL ENVIRONMENTAL IMPACT REPORT

FOR THE AV SOLAR RANCH ONE PROJECT
COUNTY PROJECT NO. R2009-02239
VESTING TENTATIVE TRACT MAP NO. TR071035
CONDITIONAL USE PERMIT NO. RCUPT200900026
ENVIRONMENTAL REVIEW NO. RENVT200900027
STATE CLEARINGHOUSE NO. 2009041145

PROJECT FINDINGS ORGANIZATION

Section 1 Introduction

Section 2 Findings Regarding Potential Environmental Effects Which are Not Significant or Which Have Been Mitigated to a Less than Significant Level

Section 3 Findings Regarding Cumulative Environmental Effects Which are Not Significant or Which Have Been Mitigated to a Less Than Significant Level

Section 4 Findings Regarding Project Alternatives

Section 5 Findings Regarding the Mitigation Monitoring and Reporting Program

Section 6 CEQA Guidelines § 15091 and 15092 Findings

Section 7 CEQA Guidelines § 15084(D)(3)

Section 8 Public Resources Code § 21082.1(C) Findings

Section 9 Nature of Findings

Section 10 Reliance on Record

Section 11 Relationship of Findings to EIR

Section 12 Custodian of Records

Exhibit A Mitigation Monitoring and Reporting Program

SECTION 1.0 INTRODUCTION

The County of Los Angeles ("County") Board of Supervisors ("Board") hereby certifies and finds that the AV Solar Ranch One Project ("Project") Final Environmental Impact Report ("Final EIR"), State Clearinghouse Number 2009041145, has been completed in compliance with the California Environmental Quality Act (Public Resources Code §§ 21000 et seq., "CEQA") and the State CEQA Guidelines (Title 14, Cal. Code Regs. §§ 15000 et seq., "CEQA Guidelines"). The Project Final EIR consists of the following documents: (1) June 2010 Draft Environmental Impact Report ("Draft EIR"); (2) June 2010 Technical Appendices to the Draft EIR; (3) August 2010 Final EIR; and (4) November 2010 Final EIR Section 6.0, Responses to Late Comments.

The Board hereby further certifies that it received, reviewed and considered the information contained in the following: (i) the Final EIR; (ii) the applications for Vesting Tentative Tract Map No. TR071035 and Conditional Use Permit No. RCUPT200900026; and (iii) all hearings, and submissions of testimony from County officials and departments, the Applicant (as defined below), the public, other public agencies, community groups, and organizations. Concurrently with the adoption of these findings, the Board adopts a Mitigation Monitoring and Reporting Program ("MMRP"), attached hereto as Exhibit A.

Having received, reviewed and considered the foregoing information, as well as any and all information in the administrative record and the record of proceedings, the Board hereby makes the following findings pursuant to and in accordance with Public Resources Code § 21081 and State CEQA Guidelines § 15090:

SECTION 1.1 PROJECT BACKGROUND

AV Solar Ranch 1, LLC, ("Applicant") proposes to construct a 230-megawatts (MW) solar photovoltaic (PV) electric generating facility on an approximately 2,100 acres of formerly agricultural, and primarily vacant land located in the unincorporated Antelope Valley, in unincorporated Los Angeles County. The Project occupies an area both north and south of State Route (SR)-138, and is approximately bounded on the north by West Avenue B-8 , on the south by West Avenue E, on the east by 155th Street West, and on the west by 180th Street West. Major project components include PV panel arrays, an electrical substation, a 20,000 square-foot Operations and Maintenance building with associated parking, and on-site drainage improvements consisting primarily of infiltration basins throughout the site. The proposed Project components also include perimeter fencing (wildlife-permeable), fire breaks, perimeter and internal access roads, a water well, two water tanks (containing approximately 100,000 and 10,000 gallons), and a septic system. The Project also includes a 230-kilovolt (kV) transmission line for interconnecting the electrical output of the Project to the regional transmission system. The proposed transmission line is approximately 4.25 miles long, including a 3.5-mile-

long off-site portion that will interconnect to Southern California Edison's (SCE) planned Whirlwind Substation north of the Project site in southern Kern County.

The Project site is adjacent to the Joshua Tree Woodland Habitat Significant Ecological Area (SEA) #60 on the north and east, roughly 850 feet northwest of the Fairmont-Antelope Buttes SEA #57, approximately 1.5 miles northwest of the Antelope Valley Poppy Reserve, 2.5 miles northeast of the Arthur B Ripley Desert Woodland State Park, and 3 miles northeast of the Desert Pines Wildlife Sanctuary.

The proposed Project site originally overlapped a small portion (a 20-acre portion) of the existing SEA #60. The Applicant's initial development proposal, as reflected in its initial development application to the Los Angeles County Department of Regional Planning ("LACDRP"), also included modifications to the on-site Drainage A and Drainage B. Drainage A was previously proposed to be engineered from the intersection of SR-138 and 170th Street West to the northeast corner of the Project site as a trapezoidal channel with a bottom width of approximately 180 feet, and a top width of approximately 250 feet. Drainage B was proposed to be developed by the construction of the solar array. The modifications to the on-site drainages resulted in a maximum total on-site grading of 700,000 cubic yards (cy). Subsequent to the release of the Notice of Preparation (NOP), the Applicant revised the Project to remove the 20-acre portion of SEA #60 area from the Project and avoid all drainages. These revisions are represented in the proposed Project evaluated in the Draft EIR.

To implement the Project, the applicant has applied for: (1) a Vesting Tentative Tract Map (VTTM) No. TR071035 for a reversion to acreage from 147 parcels to 1 parcel; and (2) a Conditional Use Permit (CUP) No. RCUPT200900026 for the construction and operation of a 230-MW solar PV facility in an agricultural zone and for grading in excess of 100,000 cubic yards of soil.

SECTION 1.2 ENVIRONMENTAL IMPACT REPORT PROCESS

In accordance with State CEQA Guidelines Section 15063, the County completed an Initial Study (April 13, 2009) for the proposed Project, and determined that an Environmental Impact Report ("EIR") was required. A NOP, including the Initial Study was circulated to the Governor's Office of Planning and Research, responsible, trustee, and interested agencies, and key interest groups on April 29, 2009 to solicit comments on the proposed content of the Draft EIR. The NOP was circulated for the required 30-day comment period which ended June 1, 2009. A Scoping Meeting was held on May 14, 2009 in Lancaster (Antelope Acres) to facilitate public review and comment on the Project. The Draft EIR includes the Initial Study, the comment letters received during the public review period in response to the NOP, and verbal comments received during the Scoping Meeting (see Draft EIR Appendix A). All NOP comments relating to the EIR

were reviewed and the issues raised in those comments were addressed, to the extent feasible, in the Draft EIR.

Potentially significant environmental impacts addressed in the Draft EIR include Geotechnical Hazards, Flood Hazards, Fire Hazards, Water Quality, Air Quality, Biological Resources, Cultural and Paleontological Resources, Agricultural Resources, Visual Qualities, Traffic and Access, Fire and Sheriff Services, Utility Services, Environmental Safety, Land Use, Global Climate Change, Noise, Change In Character, and Growth Inducing impacts. The Draft EIR analyzed both project and cumulative effects of the Project on these topics and identified a variety of mitigation measures to minimize, reduce, avoid, or compensate for the potential adverse effects of the proposed Project. The Draft EIR also analyzed a number of potential alternatives to the proposed Project, including: 1) No Project Alternative; 2) Alternative Facility Layout; and 3) Underground Transmission Lines. Potential environmental impacts of each of these alternatives were discussed at the CEQA-prescribed level of detail and comparisons were made to the proposed Project.

The Initial Study determined that the Project would result in less than significant or no impact to several environmental resource areas: Mineral Resources, since the Project would not have the potential to result in the loss of availability of a known mineral resource of value to the region, including those identified in a local general plan, specific plan, or other land use plan; Sewage Disposal, based on the Project not being located in an area served by a community sewage system, and thus would not create a capacity problem in sewer lines or at a treatment plant; Education, since the Project does not involve residential development, and does not have the potential to create capacity problems at the school district level, individual schools, and libraries; and Recreation, based on the Project lacking the potential to create new demand for recreational resources in the Project region, as the Project is intended to generate renewable, solar energy with a long-term operation workforce of only approximately 16 persons. While the Initial Study did not identify potentially significant impacts to Agricultural Resources or Noise, these two resource disciplines were also included in the Draft EIR for further assessment of potential impacts.

Following the LACDRP internal departmental review and analysis of the proposed Project through the screencheck process, the Draft EIR was submitted to the State Clearinghouse, Governor's Office of Planning and Research, and circulated for public review period beginning June 16, 2010. The 45-day public review period required by State CEQA Guidelines § 15087 ended on July 30, 2010. A Notice of Availability for the Draft EIR was published in the *Antelope Valley Press* and *La Opinión* newspapers, and a public hearing notice was sent to property owners within a 1000-foot radius of the proposed Project site and to known interested individuals and organizations. The public hearing notice was also posted at the Project site.

The Los Angeles County Regional Planning Commission ("Commission") conducted a public hearing on the Project on June 30, 2010 and heard a presentation by Staff and the Applicant. At this hearing, Staff recommended and the Applicant agreed to underground nearly all portions of the Project-related 34.5-kV and 230-kV transmission lines in the County of Los Angeles, as analyzed in Project Alternative 3 in the Draft EIR. Two members of the public (representatives of the Antelope Valley Trade Association and the Greater Antelope Valley Economic Alliance) testified in favor of the Project, and two members of the public (both from the Antelope Acres Town Council) testified with concerns regarding the Project. After public testimony, the Commission continued the Project hearing to September 15, 2010.

The August 2010 Final EIR, which contained written responses to comments received during the noticed comment period, was completed and submitted to the State Clearinghouse/Governor's Office of Planning and Research, and distributed on August 31, 2010. Distribution of the Final EIR entailed providing copies of the Final EIR to public agencies and organizations that commented on the Draft EIR, and notifying individuals who commented on the Draft EIR of the Final EIR availability. The Final EIR was made available to the public on the County's website, at the LACDRP location, and at five public libraries located in the vicinity of the Project area. The Final EIR was prepared and distributed in accordance with State CEQA Guidelines §15088, which requires that written responses be provided at least 10 days prior to certifying an environmental impact report.

At the September 15, 2010 public hearing, four members of the public testified in favor of the Project; the president of the Antelope Acres Town Council, a representative of the Desert and Mountains Conservation Authority, and representatives of the Greater Antelope Valley Economic Alliance and the Los Angeles Economic Development Corporation. No testifiers spoke against the Project. The Commission determined that the undergrounding of both the on-site and off-site 34.5-kV and 230-kV transmission lines within the unincorporated County area is required, with the exception of three required above ground public right of way crossings including one above ground point of connection at the Kern County border and above ground crossings over jurisdictional drainages in order to minimize visual intrusion and minimize the proliferation of above ground transmission lines as well as to ensure compliance with the applicable provisions of the Countywide General Plan and the Antelope Valley Areawide General Plan. The Commission also found the Project to be consistent with the applicable Los Angeles Countywide General Plan and Antelope Valley Area Plan and policies, and that the Project meets the necessary findings for the proposed VTTM and CUP pursuant to the Subdivision Map Act and applicable County Code provisions. The Commission adopted the EIR, associated MMRP, and CEQA Findings of Fact, and approved the CUP, VTTM, and associated CUP and VTTM Findings and Conditions.

Following the close of the noticed Draft EIR comment period, four late comment letters were transmitted to LACDRP. These letters included a letter from the California Department of Transportation (Caltrans) dated September 14, 2010, a letter from Adams Broadwell Joseph & Cardozo, on behalf of the California Unions for Reliable Energy (CURE) dated September 14, 2010, and an email from Ms. Melody Mokres dated September 14, 2010. Additionally, on September 24, 2010, Ms. Kyndra Joy Casper, Esq. from Sheppard Mullin Richter & Hampton, LLP, who is agent and representative of Northrop Grumman Corporation, filed an appeal on the Commission decision. The September 24, 2010 appeal was submitted with an attached Rider containing late comments on the June 2010 Draft EIR and August 2010 Final EIR.

LACDRP subsequently prepared the November 2010 Final EIR Section 6.0, Responses to Late Comments to respond to the late comments received after the close of the noticed Draft EIR public comment period (July 30, 2010), and after the August 2010 Final EIR was issued.

The Board finds that the Project does not require recirculation under CEQA (Public Resources Code Section 21092.1, CEQA Guidelines Section 15088.5). CEQA Guidelines Section 15088.5 requires recirculation of an EIR prior to certification of the Final EIR when "significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review." "New information is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the Project's proponents have declined to implement. 'Significant new information' requiring recirculation includes, for example, a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented;
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance;
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it;
4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded."

In addition, CEQA Guidelines Section 15088.5(b) provides that "recirculation is not required where the new information added to the EIR merely clarifies and amplifies or

makes insignificant modifications in an adequate EIR." The Board makes the following findings:

1. None of the public comments submitted to the County regarding the Draft EIR and August 2010 Final EIR, including public statements and comments made at the Commission and Board hearings, or responses to comments presented any significant new information that would require the EIR to be re-circulated for public comments.

2. No new significant environmental impacts would result from new or modified mitigation measures proposed to be implemented.

3. The Draft EIR analyzed both the aboveground and the underground placement of the 34.5-kV and 230-kV transmission lines and concluded that neither the aboveground nor the underground transmission lines would result in significant environmental impacts.

4. The Draft EIR was not fundamentally and basically inadequate and conclusory in nature and did not preclude meaningful public review and comment.

5. The new information in the August 2010 Final EIR and the November 2010 Final EIR Section 6.0, Responses to Late Comments has been provided merely to clarify or amplify information in the Draft EIR. The new information does not reveal that the Project would cause significant new impacts not previously identified in the Draft EIR.

SECTION 1.3 PROJECT FINDINGS INTRODUCTION

The Findings made by the County, pursuant to Section 21081 of CEQA, and Section 15091 of the State CEQA Guidelines, on the consideration of the AV Solar Ranch One Project in unincorporated Los Angeles County, California are presented below. All significant impacts of the Project identified in the Final EIR are included herein and are organized according to the resources affected.

The Findings in this document are for the AV Solar Ranch One Project and are supported by information and analysis from the Final EIR and other evidence in the administrative record.

For each significant impact, a Finding has been made as to one or more of the following, in accordance with Public Resources Code §21081 and State CEQA Guidelines §15091:

A. Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

B. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

C. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

A narrative of supporting facts follows the appropriate Finding. For all of the impacts, one or more of the findings above have been made. The proposed Project did not result in a scenario for Finding “C” (as defined above).

SECTION 2.0 FINDINGS REGARDING POTENTIAL ENVIRONMENTAL EFFECTS WHICH ARE NOT SIGNIFICANT OR WHICH HAVE BEEN MITIGATED TO A LESS THAN SIGNIFICANT LEVEL

All Final EIR mitigation measures, as set forth in the Mitigation Monitoring and Reporting Program (attached as Exhibit A to these findings) have been incorporated by reference into the conditions of approval for the Project. These mitigation measures and conditions of approval will result in a substantial mitigation of the effects of the Project such that the effects are not significant or have been mitigated to a level of less than significant. The Board has determined, based on the Final EIR, that Project design features, mitigation measures, and conditions of approval will reduce Project impacts concerning Geotechnical Hazards, Flood Hazards, Fire Hazards, Water Quality, Air Quality, Biological Resources, Cultural and Paleontological Resources, Agricultural Resources, Visual Qualities, Traffic and Access, Fire and Sheriff Services, Utility Services, Environmental Safety, Land Use, Global Climate Change, Noise, Change In Character, and Growth Inducing Impacts.

2.1 GEOTECHNICAL HAZARDS

Potential Effect:

The Project would significantly impact geotechnical resources if it would result in substantial adverse impacts from active or potentially active fault zones, landslides, subsidence, high groundwater, liquefaction, hydrocompaction, expansive soil, and grading.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project site and transmission line route are not located within or in the near vicinity of active or potentially active fault zones, landslide areas, or areas of high subsidence, high groundwater, liquefaction, hydrocompaction, or high soils expansion potential.

The potential exists for the Project to be subject to moderate to strong ground motion since the site is located in a seismically active region; however, implementation of geotechnical design recommendations per the Geotechnical Engineering Report, and conformance with appropriate California and Los Angeles County Building Code criteria and applicable industry standards would reduce potential geotechnical-related hazards to a less than significant level.

Construction of the Project would require grading over the site area; however, grading would be balanced cut and fill, performed in accordance with a Grading Plan approved by the Los Angeles County Department of Public Works (LACDPW), and would be performed in conjunction with Best Management Practices (BMPs) to minimize potential wind and water erosion effects.

The following mitigation measure requires implementation of adequate geotechnical design considerations and applicable building codes and standards to reduce potential geotechnical hazards to a less than significant level:

Mitigation Measure 5.2-1: Implementation of Geotechnical Engineering Report Recommendations. The design and construction of the Project shall comply with applicable building codes and standards (e.g., CBC) as well as the recommendations in the geotechnical engineering report (Terracon 2009) to the satisfaction of the Los Angeles County Department of Public Works.

2.2 FLOOD HAZARDS

Potential Effect:

Potential significant impacts to flood hazards include whether the Project would alter existing drainage patterns of the site or area, or whether the Project would expose people or structures to a significant risk of loss, injury, or death from flooding or inundation.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project would be designed to maintain the drainage pattern of the site in accordance with the Project Drainage Concept Report (Appendix C of the Draft EIR), as approved by LACDPW. As designed in the Project Drainage Concept Report, the Project would result in less than significant effects to alter the existing drainage pattern.

The majority of the Project site is mapped as Federal Emergency Management Agency (FEMA) Zone X, Unshaded and Shaded, and the portion of Drainage C on the site is mapped as Zone A. The proposed Project is designed to withstand scouring or undermining of foundations in areas that may be subject to periodic inundation, and would avoid all drainages (including Drainage C and the associated Zone A area) and incorporate appropriate setbacks. These design considerations are expected to result in less than significant effects. Approximately 22 transmission structures would be located on the edge of the 100-year floodplain (Zone A), while the remainder are located in Zone

X, Unshaded. The transmission line poles are designed to withstand potential flooding and erosion hazards, and would be installed in accordance with applicable floodplain development guidelines. Based on these design measures as well as the small total footprint located within a flood plain, impacts are expected to be less than significant.

Project construction would involve earth disturbance, selective vegetation clearing, and increase of impervious surfaces, which have the potential to increase runoff and erosion. This potentially significant impact is mitigated to a less than significant level with implementation of stormwater management measures, as incorporated in the following feasible mitigation measure:

Mitigation Measure 5.3-1: Erosion Control and Stormwater Management Measures. In order to ensure that Project-related erosion and debris deposition as well as stormwater related impacts would be minimized, the design measures specified in the Drainage Concept Report (Psomas 2009) and the following measures shall be implemented subject to review and approval by the Los Angeles County Department of Public Works (LACDPW):

- Avoidance of all drainage areas: Construction and operational phase activities shall avoid all on-site drainages and FEMA Zone A floodplain areas. Solar field development shall be set back from the two major drainages (Drainages A and C) by a minimum of approximately 100 feet from the tops of banks for both Drainages A and C. Additionally, all Project development shall be set back a minimum of 100 feet from the FEMA Zone A floodplain for Drainage C.
- Applicant shall comply with NPDES requirements of the Lahontan Regional Water Quality Control Board (LRWQCB) and the LACDPW.

2.3 FIRE HAZARDS

Potential Effect:

The Project would have a significant impact if it is subjected to very high fire hazards associated with a Very High Fire Hazard Severity Zone, served by inadequate access or fire water requirements, or constituted a potentially dangerous fire hazard.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment..

Facts Supporting the Finding:

The Project site and transmission line route are not located within a recommended Local Agency Very High or High Fire Hazard Severity Zone. Construction of utilities across

and/or along SR-138 and 170th Street West may potentially encroach into the traveled roadway; however, implementation of MM 5.11–1 (Provide Adequate Worksite Traffic Control), which requires worksite Traffic Control Plans, permits, and County coordination, such that emergency access would not be significantly affected.

The Project would maintain an estimated 100,000 gallon water tank near the Operations and Maintenance (O&M) Building to provide fire protection water (90,000 gallons, as required by the Los Angeles County Fire Department [LACFD]) and service water (10,000 gallons) needs. Additionally, a second 10,000-gallon firewater tank would be installed and maintained near the southern site entrance. Adequate firewater pressure would be delivered using an electric pump (a diesel-fueled backup pump may be installed by the Applicant so that firewater is available during power outages). The Project is not designed to require a substantial water supply and the Project wells and on-site firewater storage tanks would be expected to be sufficient to meet fire protection water needs. There is sufficient water to supply the Project needs, including 100,000 gallons of firewater for the on-site firewater storage tanks. In the event that groundwater becomes unavailable, a backup water supply (e.g., via trucking) would be utilized to provide a reliable firewater supply. As a result, the Project would not be anticipated to cause significant impacts resulting from inadequate firewater supply or pressure.

The Project site is expected to provide adequate firewater yields for Project construction and operation, based on on-site well testing data. In accordance with LACFD requirements, the Project would maintain adequate quantities of firewater in the Project water storage tanks, and adequate pressure would be delivered by an electric pump.

Project fire risks during construction pertain to smoking, refueling, welding activities, handling and storage of flammable materials, and vehicle operation and equipment use off roadways. Implementation of Mitigation Measure 5.4-1 Fire Protection and Prevention Plan (below) requires fire prevention management of potential fire hazards during construction, which would reduce the potential fire risks during construction to a less than significant level. The Plan shall address smoking rules, flammable materials handling and storage, equipment and vehicle maintenance and proper use, smoking, fuel management, and training during operation.

Project fire hazards during operation result from use of fuel and oils, and use of maintenance equipment and vehicles. The Project would implement an Operations Fire Protection and Prevention Plan, which shall address fire alarm and procedures, system and equipment maintenance, inspections, housekeeping practices, and training. Fire protection measures during operations include: fire suppression systems at the Operations and Maintenance building, plant control room, and electrical equipment enclosures; vegetation management programs in accordance with the Vegetation Management and Fire Control Measures Plan (Draft EIR, Appendix K); permanent fire breaks (Figure 4.4-1D and Vegetation Management and Fire Control Measures Plan [Appendix K] of the

Draft EIR); use of appropriately rated electrical equipment (i.e., Underwriters Laboratories tested, designated with fire resistance rating, National Electrical Manufacturers Association (NEMA)-rated, Conformance European (CE) certifications, etc.). Implementation of the Operations Fire Protection and Prevention Plan and Project fire protection measures would reduce potential fire risks during operation to a less than significant level.

The on-site and off-site transmission lines may pose a fire hazard, when a conducting object comes in close proximity of a line, or in the event that a live-phase conductor falls to the ground. Transmission line clearances for vegetation will be implemented in accordance with Los Angeles County Title 32 Fire Code, Section 317 (Clearance of Brush and Vegetative Growth), Public Resources Code Section 4292 (Power Line Hazard Reduction), PRC Section 4293 (Power Line Clearance Required), and Public Utilities Commission General Order 95 (Rules for Overhead Electric Line Construction). Additionally, during transmission line maintenance activities (i.e., transmission line inspection, vegetation clearance, etc.) operating vehicles and equipment may potentially spark, and result in fire danger. Implementation of Mitigation Measure 5.4-1 (Fire Protection and Prevention Plan), as described below would reduce the potential impacts associated with fire hazards to less than significant.

With implementation of the following safety and mitigation measure, it is expected that potential impacts associated with fire hazards would be reduced to a less than significant level.

MM-5.4-1: Fire Protection and Prevention Plan. The proposed Project shall develop and submit a Fire Protection and Prevention Plan to the LACFD for review and approval prior to issuance of a Grading Permit. The Plan shall address construction and operation activities for the Project, and establish standards and practices that will minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification.

The Fire Protection and Prevention Plan shall address spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, and fire suppression equipment and training requirements. In addition, all vehicle parking areas, storage areas, stationary engine sites and welding areas shall be cleared of all vegetation, and flammable materials. All areas used for dispensing or storage of gasoline, diesel fuel or other oil products shall be cleared of vegetation and other flammable materials. These areas shall be posted with signs identifying they are “No Smoking” areas. An interim fire protection system shall be in place during construction until the permanent system is completed. The Plan shall also address vegetation clearance and maintenance requirements applicable to the transmission pole structures during operation.

Special attention shall be paid to operations involving open flames, such as welding, and use of flammable materials. Personnel involved in such operations shall have appropriate

training. A fire watch utilizing appropriately classed extinguishers or other equipment shall be maintained during hot work operations. Site personnel shall not be expected to fight fires past the incident stage. The local responding fire officials shall be given information on the site hazards and the location of these hazards, and the information shall be included in the emergency response planning.

Materials brought on-site shall conform to contract requirements, insofar as flame resistance or fireproof characteristics are concerned. Specific materials in this category include fuels, paints, solvents, plastic materials, lumber, paper, boxes, and crating materials. Specific attention shall be given to storage of compressed gas, fuels, solvents, and paint. Electrical wiring and equipment located in inside storage rooms used for Class I liquids shall be stored in accordance with applicable regulations. Outside storage areas shall be graded to divert possible spills away from buildings and shall be kept clear of vegetation and other combustible materials.

On-site fire prevention during construction shall consist of portable and fixed firefighting equipment. Portable firefighting equipment shall consist of fire extinguishers and small hose lines in conformance with the California Division of Occupational Safety and Health (Cal-OSHA) and the National Fire Protection Association (NFPA) for the potential types of fire from construction activities. Periodic fire prevention inspections shall be conducted by the contractor's safety representative.

Fire extinguishers shall be inspected routinely and replaced immediately if defective or in need of recharge. All firefighting equipment shall be conspicuously located and marked with unobstructed access. A water supply of sufficient volume, duration, or pressure to operate the required firefighting equipment shall be provided on-site. Authorized storage areas and containers for flammable materials shall be used with adequate fire control services.

The Operations Fire Protection and Prevention Program shall address the following:

- Names and/or job titles responsible for maintaining equipment and accumulation of flammable or combustible material control
- Procedures in the event of fire
- Fire alarm and protection equipment
- System and equipment maintenance
- Monthly inspections
- Annual inspections
- Firefighting demonstrations
- Housekeeping practices

- Training

2.4 WATER QUALITY

Potential Effect:

The Project would have a significant impact to water quality if it resulted in substantial water quality impacts due to use of water wells in an area of known water quality problems, or a septic system, and construction or post-construction activities.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project area is not located in an area of known water quality problems. The Project proposes use of an onsite wastewater treatment system, which includes a septic tank and leachfield. The Project site is not located within an area having high groundwater or geotechnical limits, and the proposed septic system would not be located in close proximity to a drainage course. The proposed septic system shall be designed and installed in accordance with Los Angeles County Department of Public Health (LACDPH) standards, as identified in Mitigation Measure 5.5-1, On-site Wastewater Treatment System Feasibility Report, as described below. As a result, the Project would result in less than significant impacts to groundwater quality. The Project construction activities would not reach the depth of groundwater, which is estimated to be approximately 130 to 200 feet below ground surface (bgs).

The Project and transmission line construction and operation activities have the potential to impact the quality of local stormwater runoff due to earth disturbance activities, which cause erosion and excess sedimentation, and use of chemicals (e.g., paints, solvents, petroleum oils, dielectric oils, etc.), leading to pollutant transport. The Project proposes use of an onsite wastewater treatment system. Project area depth to groundwater is not shallow, and is expected to range from 130 feet to over 200 feet bgs. Project construction would involve earth disturbance, selective vegetation clearing, and use of petroleum-based liquids and other chemicals (e.g., paints, solvents, oils, dust palliatives, equipment fluids, etc.), which have the potential to release stormwater pollutants. The Project would be constructed with design measures to reduce the potential for sedimentation: structures will be designed to withstand scouring or undermining of foundations in areas that may be subject to periodic inundation, and site development would only occur in the lower flood risk areas, and facility structures would avoid all drainages and Zone A areas. Project operation would involve vegetation management, clearing infiltration basin areas, and use of petroleum-based liquids and other chemicals. The potentially significant

construction and operation impacts to water quality are mitigated to less than significant levels with implementation of Mitigation Measure 5.3-1, Erosion Control and Stormwater Management Measures. These measures include compliance with applicable National Pollutant Discharge Elimination System (NPDES) requirements of the Lahontan Regional Water Quality Control Board and the LACDPW. Pertinent water quality protection measures include good housekeeping practices, inspections, monitoring, and maintenance of site facilities, spill prevention and control procedures, and ensuring stormwater runoff to be directed away from operating, processing, fueling, cleaning, and storage areas.

The following mitigation measure requires implementation of appropriate design standards for the proposed onsite wastewater treatment system, and is expected to reduce potential water quality impacts to a less than significant level:

Mitigation Measure 5.5-1: On-site Wastewater Treatment System Feasibility Report. Prior to construction/installation of the on-site septic/leach field system, a complete OWTS feasibility report shall be submitted to the LACDPH for review and approval. The feasibility report shall be prepared in conformance with the requirements outlined in the current version of LACDPH guidelines, "On-site Wastewater Treatment System Guidelines."

2.5 AIR QUALITY

Potential Effect:

The Project would have significant impacts to air quality if it exceeded the State's criteria for regional significance, exceed or conflict with air quality thresholds, standards, or plans, and generate or be in close proximity to sources that create dust and/or hazardous emissions.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project is classified as one of regional significance based on site acreage. However, the Project's operational emissions for the solar PV facility would be below the applicable significance thresholds and the facility would employ far fewer than 1,000 employees, so impacts to air quality would not be regionally significant. Construction of the proposed Project would result in emissions of criteria pollutants from construction equipment and mobile sources. In addition, construction activities would generate dust associated with ground-disturbing activities and vehicular/equipment movement on unpaved surfaces. Based on analysis of the construction emissions for the Project site and

transmission line, the total construction emissions, with implementation of Mitigation Measure 5.6-1 through 5.6-10, below, are less than the corresponding Antelope Valley Air Quality Management District (AVAQMD) emissions thresholds for criteria pollutants, including fugitive dust.

The Project would not conflict with or obstruct implementation of any of the proposed measures of the ozone attainment plan for AVAQMD. The construction-phase emissions would be short-term, and would not conflict with the long-term progress toward attainment because construction phase emissions comprise a small fraction of total AQMD inventory and are short-term and transitory in nature. The Project's use of a compliant fleet of non-road engines by the construction contractor (Mitigation Measure 5.6-4) would be consistent with the state and local plan requirements. Operation of the proposed Project, including the off-site transmission line, would not conflict with or obstruct implementation of any of the measures of the AVAQMD or the Kern County Air Pollution Control District (KCAPCD), including the AVAQMD ozone attainment plan. Operation of the Project involves passive electrical generation using the PV panels, panel washing, vegetation cutting and clearing, firewater pump engine testing, and water and maintenance truck activities. During operations, the quantified criteria pollutant emissions would be below the AVAQMD significance thresholds by a large margin.

The Project would generate diesel fumes (state regulated Toxic Air Contaminant [TAC]) during construction; however, due to the Project's temporary generation and buffer of land to the nearest residence, effects would be less than significant. Dust in the Project region is presumed to contain the C. *immitis* fungi, which can cause Valley Fever. The local populace is already exposed to dust likely containing the fungi, and exposure over time increases immunity to Valley Fever. However, construction workers not native or living in the area may be more susceptible to contracting Valley Fever. As a result, the Project would implement Mitigation Measures 5.6-2, 5.6-3, and 5.6-11 (below) to reduce potential impacts to less than significant levels. Project operations would not be expected to produce obnoxious odors or hazardous emissions. As a result, impacts would be less than significant.

Implementation of the following feasible mitigation measures as identified in the Draft EIR, would reduce potential Project impacts to air quality to less than significant levels:

MM 5.6-1: Ensure AVAQMD Construction Emission Thresholds would be Met. Prior to issuance of the grading permit, the Applicant shall select an engineering, procurement, and construction (EPC) contractor to build the Project. The Applicant/EPC contractor shall be required to demonstrate that the final construction plans will not result in exceedances of applicable AVAQMD air emission significance thresholds during construction of the Project to the satisfaction of AVAQMD and LACDRP.

Prior to issuance of a grading permit, the Applicant shall prepare a report describing the Applicant's final engineering design-based plan for constructing the Project, including: 1) scheduling of construction activities; 2) equipment usage and details; 3) construction workforce loading; 4) truck deliveries schedule; and 5) ground disturbing/dust generating activities, etc. The report shall include emission calculations to demonstrate that the final construction plan will not result in exceedances of all applicable AVAQMD criteria pollutant emissions thresholds to the satisfaction of AVAQMD. The emission calculations shall include consideration of the emission reductions provided by implementation of Mitigation Measures 5.6-2 through 5.6-10, below.

MM 5.6-2: Develop and Implement Fugitive Dust Emission Control Plan. The Applicant shall develop a Fugitive Dust Emission Control Plan (FDECP) for construction work. The FDECP shall be submitted to AVAQMD for review and approval prior to issuance of a grading permit.

Measures to be incorporated into the FDECP shall include, but are not limited to the following:

- The proposed PM measures (#24 to #44) in AVAQMD's List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health & Safety Code §39614(d) shall be incorporated into the fugitive dust control plan, as applicable.
- Non-toxic soil binders shall be applied per manufacturer recommendations to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction to reduce fugitive dust emissions.
- Travel on unpaved roads shall be reduced to the extent possible, by limiting the travel of heavy equipment in and out of the unpaved areas.
- Water the disturbed areas of the active construction sites at least three times per day, (when soil moisture conditions result in dust generation) and more often if visible fugitive dust leaving the site is noted.
- Enclose, cover, water twice daily, and/or apply non-toxic soil binders according to manufacturer's specifications to exposed piles of soils with a five percent or greater silt content.
- Maintain unpaved road vehicle travel to the lowest practical speeds, and no greater than 15 miles per hour (mph), to reduce fugitive dust emissions.
- All vehicle tires shall be inspected, be free of dirt, and washed as necessary prior to entering paved roadways from the Project site.
- Install wheel washers or wash the wheels of trucks and other heavy equipment where vehicles exit the site.

- Cover all trucks hauling soil and other loose material, or require at least 2 feet of freeboard.
- Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures) or otherwise create stabilized surfaces on all unpaved areas through application of dust palliatives at each of the construction sites within 21 days after active construction operations have ceased.
- Prepare contingency for high wind periods (greater than 25 mph) to shutdown or mitigate activity as necessary to control fugitive dust.
- Travel routes to each construction site area shall be developed to minimize unpaved road travel. Travel management shall include staging of deliveries to minimize idling or congestion, use of dust palliatives or soil tackifiers on road surfaces, and minimizing travel distance.

MM 5.6-3: Dust Plume Response Requirement. An air quality construction mitigation manager (AQCMM) or delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported: 1) off the Project site; 2) 200 feet beyond the centerline of the construction of linear facilities; or 3) within 100 feet upwind of any regularly occupied structures not owned by the Project owner indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall promptly implement additional dust plume reduction measures in the event that such visible dust plumes are observed. Additional measures to be implemented, as necessary, shall include increased watering, application of dust palliatives, and/or scaled back construction activities up to and including temporary work cessation.

MM 5.6-4: Off-road Diesel-fueled Equipment Standards. All portable construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 hp or more, and all off-road construction diesel engines not registered under CARB's In-use Off-road Diesel Vehicle Regulation, which have a rating of 25 hp or more, shall meet, the projected 2011 fleet average of NOX and PM emissions as that predicted by the OFFROAD2007 model in Appendix D. The EPC shall use the CARB Portable Diesel Engine Airborne Toxic Control Measure (ATCM) Fleet Calculators and the Off-road Diesel Fleet Average Calculators (for large/medium fleets) in accordance with the respective regulation under Title 13 of the California Code of Regulations (CCR) to conduct this comparison. No Tier 0 diesel equipment shall be used at the site after the initial calculation/registration without recalculation using the CARB fleet calculators. The fleet average calculation of the on site equipment shall be conducted annually to ensure compliance. The EPC contractor shall ensure labeling of all portable and off road diesel equipment in accordance with Title 13 of the CCR.

MM 5.6-5: Limit Vehicle Traffic and Equipment Use. Vehicle trips and equipment use shall be limited by efficiently scheduling staff and daily construction activities to minimize the use of unnecessary/duplicate equipment.

MM 5.6-6: Heavy Duty Diesel Water Haul Vehicle Equipment Standards. For the pile foundation case (which results in higher air emissions than the ballast foundation case and requires additional mitigation), the EPC shall use 2006 model or newer engines in order to meet the EMFAC predicted emissions levels in grams of pollutant per mile travelled (g/mile) of on-road heavy duty diesel trucks used for water hauling at the site. The EPC contractor shall ensure labeling of such trucks to indicate model year.

MM 5.6-7: On-road Vehicles Standards. All on-road construction vehicles shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.

MM 5.6-8: Properly Maintain Mechanical Equipment. The construction contractor shall ensure that all mechanical equipment associated with Project construction is properly tuned and maintained in accordance with the manufacturer's specifications.

MM 5.6-9: Restrict Engine Idling to 5 Minutes. Diesel engine idle time shall be restricted to no more than 5 minutes as required by the CARB engine idling regulation. Exceptions in the regulation include vehicles that need to idle as part of their operation, such as concrete mixer trucks.

MM 5.6-10: Off-road Gasoline-fueled Equipment Standards. Any off-road stationary and portable gasoline powered equipment brought on site for construction activities shall have USEPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in affect two years prior to the commencement of Project construction. In the event that USEPA Phase 1/Phase 2 compliant engines are determined not to be available, the Applicant shall provide documentation to the AVAQMD with an explanation.

MM 5.6-11: Off-road Equipment Operator Worker Protection. Appropriate training for respiratory protection shall be provided to construction workers. Dust masks (NIOSH approved) shall be provided with proper training to construction workers to mitigate the protection against dust exposure and possibly Valley Fever during high wind events and/or dust-generating activities.

2.6 BIOLOGICAL RESOURCES

Potential Effect:

The Project would result in potentially significant impacts to biological resources if it: removed substantial natural habitat areas; significantly impacted sensitive natural

communities; significantly impacted unique native trees; diverted, obstructed, or substantially altered a drainage course; substantially adversely impacted candidate, sensitive, or special-status species; interfered substantially with any wildlife corridor; or adversely affected Significant Ecological Area (SEA) resources.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project construction and operation would result in temporary and permanent removal of habitat, as well as habitat modification resulting from Project-related shading and fuel modification (vegetation management). As a result, the construction and operation of the Project would result in impacts to habitat and wildlife species using the habitat. Mitigation for this impact is provided in Mitigation Measure 5.7-1 and 5.7-2 (below). Four ephemeral drainage courses (as depicted on USGS quad sheets) are located on the site, which the Project would avoid and protect with implementation of buffer areas.

The Project site contains two sensitive natural vegetation communities, consisting of a wildflower field and Joshua tree recruitment area. Construction and operation of the Project would cause temporary and permanent impacts to a substantial portion of wildflower fields within the Project site, which will be mitigated through implementation of Mitigation Measure 5.6-2 (Develop and Implement Fugitive Dust Emission Control Plan) and Mitigation Measures 5.7-1 through 5.7-3 (below). The Project would avoid the Joshua tree recruitment area and protect with a buffer area. The area may be impacted by fugitive dust generated during construction activities, which is mitigated through Mitigation Measure 5.7-3 (below). A mature Joshua tree and two seedlings are located within the site property along 170th Street West, and will be avoided by the Project. Potential edge effects from fugitive dust generated during construction will be minimized through Mitigation Measure 5.6-2 (Develop and Implement Fugitive Dust Emission Control Plan). The Project would remove no Joshua trees during construction of the proposed transmission line, and would disturb very small acreages (less than 0.2 acre) of Joshua tree woodlands. As a result, impacts to this vegetation type along the proposed transmission line route would be less than significant.

The Project would avoid and protect, through incorporation of construction and development setback areas, four ephemeral drainage courses located on the site.

No federally or state endangered or threatened species are expected to occur in the Project site and proposed transmission line route. One individual special status reptile, the Blainville's Horned Lizard, was observed in the sandy channel of Drainage C, in the southeastern corner of the Project site. However, current range maps for this species

suggest that the lizard is not expected to be common on the site, particularly north of SR-138. In the event of occurrence on the Project site, Blainville's horned lizards may be potentially injured or killed during construction ground-disturbance activities. Operational impacts include risk of mortality by vehicles and disturbance on access roads from workers. Additionally, the PV panels, similar to the existing onsite shrubs, may provide perching opportunities for ravens, which are known to prey on juvenile and adult Blainville's horned lizards. Therefore, the Project would implement Mitigation Measures 5.7-1, 5.7-2, and 5.7-5 through 5.7-7 (below), which would reduce impacts to Blainville's horned lizard resulting from injury, mortality, and habitat loss to less than significant levels.

The special-status California burrowing owl was observed to be a resident on the Project site. Construction disturbances could potentially interfere or result in owl mortality in the event that activities occur during nesting periods. Development of the site would permanently and substantially alter the habitat such that developed areas would likely be unsuitable for continued use by this species. As a result, the Project would implement Mitigation Measures 5.7-2 through 5.7-4, 5.7-6 through 5.7-10 (below), which would reduce impacts to the California burrowing owl caused from injury, mortality, and habitat loss to less than significant levels.

Several special-status bird species (not counting the burrowing owl) use on-site habitat to fulfill a portion of their ecological requirements. A portion of these species were judged to use the site minimally, and the remaining use the site either as nesting habitat or for foraging or wintering during nesting or special-status season. The proposed removal and modification of on-site habitats would render the majority of the site unsuitable or marginally suitable for use by the special-status species. The Project would therefore implement Mitigation Measures 5.7-1, 5.7-4 through 5.7-7, and 5.7-9, in order to reduce and compensate for this impact to less than significant levels.

The desert tortoise is unlikely to occur within the Project site and proposed transmission line route due to known distribution and lack of suitable habitat. However, as an added precaution, Mitigation Measure 5.7-13, Pre-construction Desert Tortoise Surveys, is included, as recommended by the U.S. Fish and Wildlife Service (USFWS) to ensure that this species is avoided, and would further lessen the probability of the Project result in impacts to the desert tortoise.

While not observed in the Project area, the desert kit fox has the potential to occur based on the presence of suitable habitat for the fox. The desert kit fox maintains no formal sensitivity designation, but take of this species is prohibited by California Department of Fish and Game (CDFG) regulations. If desert kit fox were present on-site during construction, injury or mortality of this species could occur due to construction activities; therefore, Mitigation Measure 5.7-12 (below) would be implemented to reduce potential effects to less than significant levels. Long-term, operational effects of the Project would

not be considered likely due to the decreased habitat, decreased abundance, and/or altered composition of prey base on-site, and Project maintenance activities.

The Project site is not located within an area identified as a large-scale habitat linkage, and movement through the site by terrestrial wildlife is somewhat constrained by the presence of 2 paved roadways, SR-138 and 170th Street West. However, small and medium-sized wildlife are known to move through the site; therefore, the proposed Project design includes wildlife permeable fencing interspersed with chain-link fencing in order to allow for wildlife movement within and around the site.

The Joshua Tree Woodland Habitat SEA (SEA 60) is adjacent to the Project site along portions of the northern and eastern property boundaries. The Project facility is designed to incorporate 100-foot setbacks from property boundaries along these areas (i.e., fenceline would be constructed 100 feet from the property boundary). However, the Project may potentially result in indirect impacts to the adjacent SEA areas resulting from fugitive dust and noise generated during construction activities, and potential facility light spillover during operations. As a result, the Project would implement Mitigation Measure 5.6-2 (Develop and Implement Fugitive Dust Emission Control Plan) and Mitigation Measure 5.18-1 (Pile Driver Orientation), which would reduce the potential indirect light and noise impacts to less than significant levels.

Adoption of the following feasible mitigation measures as identified in the Final EIR, would reduce potential Project impacts to biological resources to less than significant levels:

MM 5.7-1: Habitat Enhancement and Vegetation Management Plan. Prior to issuance of a grading permit, the Project Applicant shall develop a Habitat Enhancement and Vegetation Management Plan (HEVMP) to compensate for impacts to existing vegetation communities by preserving and enhancing the remaining vegetation within the Project site. The HEVMP shall also provide measures to ensure minimal impacts to habitat along the off-site transmission line. In areas suitable for on-site mitigation, the HEVMP shall identify appropriate mitigation objectives, standards, and monitoring/reporting requirements to enhance habitat such that the resulting habitat values would be greater than those lost as a result of project implementation. These habitat values would include nesting and foraging habitat for songbirds, foraging habitat for raptors and owls, and high diversity and abundance of native forbs/wildflowers. In areas rendered unsuitable for mitigation due to proposed development, the HEVMP shall identify appropriate restrictions, such as limiting noxious weeds, but shall not impose mitigation standards. The HEVMP shall be prepared by a qualified restoration biologist experienced with desert habitat restoration, and shall specify appropriate revegetation and management practices for the following portions of the Project site to the satisfaction of LACDRP:

- Mitigation and Avoidance Areas (refer to Figure 5.7-11 of this DEIR):
    1. Drainage A, a 100-foot setback, and the associated wildlife travel route (47.1 acres)
    2. Drainage B and a 20-foot buffer (approximately 6 acres)
    3. The southernmost portion of the Project site along Drainage C, where no development is proposed (45 acres)
    4. The Joshua tree recruitment area (8.6 acres, including buffer)
- Areas of Modified/Impacted Habitat (Unsuitable for Mitigation):
    1. All portions of the site within the fire breaks (217 acres)
    2. All interior portions of the site within the proposed solar arrays, excluding locations of proposed infiltration basins and fire breaks (1,336 acres)
    3. All portions of the site to be occupied by proposed infiltration basins (253 acres)

In general, for each of the locations enumerated above, the HEVMP shall specify, at a minimum, the following (specific details vary depending on location, and are described in the paragraphs that follow):

- The location and extent of any on-site enhancement/revegetation areas, to be depicted graphically on an aerial photograph or schematic of appropriate scale
- The quantity and species of plants to be seeded (if necessary), including the locations where each type of vegetation would be created
- A schedule and action plan to maintain and monitor the enhancement/revegetation areas
- A list of success criteria (e.g., growth, plant cover, plant/wildlife diversity) by which to measure success of the enhancement/revegetation effort
- Contingency and/or adaptive management measures in the event that enhancement/revegetation efforts are not successful

In addition, the standards and practices set forth in the HEVMP for each area shall conform to the requirements stated below:

- Within the setback zones surrounding Drainage A, Drainage B, and Drainage C the HEVMP shall provide for 101 acres of on-site mitigation, as well as 6 acres of additional avoidance area (due to its small and isolated nature, the 6-acre area surrounding Drainage B is not included as suitable mitigation land, but would nonetheless be avoided), and shall ensure the following:
    1. Drainages A, B, and C, including adjacent buffer areas shown on Figures 5.7-7 and 5.7-11, as well as the local wildlife travel route associated with Drainage A,

shall be set aside, preserved, and enhanced, and no Project-related disturbance shall be permitted in these areas.

2. Any anthropogenic discontinuities in the existing vegetation (unofficial roads, dump sites, etc.) within the ephemeral drainage setbacks shall be remedied, and such areas shall be seeded with native plant species characteristic of the surrounding vegetation.
3. Vegetative cover in herbaceous communities (grasslands, wildflower fields) shall exceed 95 percent; of this, invasive forbs (as identified by the Cal-IPC) shall not exceed five percent cover. Bare ground shall not exceed five percent excluding bare ground located within the channel bottom of an ephemeral drainage or bare ground where there is clear evidence that the bare ground was the result of mammal activity (burrows, wildlife trails, etc.).
4. Vegetative cover in shrub-dominated communities (desert saltbush scrub, rabbitbrush scrub) shall exceed 90 percent, and shrub cover shall exceed 30 percent. Invasive forbs and shrubs combined shall not exceed five percent cover, and bare ground shall not exceed five percent excluding bare ground located within the channel bottom of an ephemeral drainage or bare ground where there is clear evidence that the bare ground was caused by mammal activity (burrows, wildlife trails, etc.).
5. In Drainages A and C and the adjacent setback/buffer areas as shown on Figure 5.7-7, vegetation in the area shall remain suitable for foraging by burrowing owls and other grassland bird species. Habitat enhancement/revegetation shall be implemented if necessary to ensure continued suitability.
6. Joshua trees and junipers shall be planted, to improve habitat suitability for sensitive bird species and increase the likelihood that these areas will be occupied by such special-status species as loggerhead shrikes and long-eared owls.

- Within the Joshua tree recruitment area, the HEVMP shall provide 8.6 acres of mitigation land, and shall ensure the following:

1. The Joshua tree recruitment area and a 50-foot buffer from the Joshua tree seedlings shall be set aside and preserved, and no Project-related disturbance shall be permitted in this area.
2. Any anthropogenic discontinuities in the existing vegetation (other than the County roadbed of West Avenue C, which passes through this area) shall be remedied, and such areas shall be seeded with native plant species characteristic of the surrounding vegetation.
3. Measures shall be implemented to encourage the continued recruitment of Joshua trees into this area. Such measures may include standards for herbaceous and shrub cover, removal of non-native plants and wildlife, and others.

4. To provide nesting and perching habitat and increase structural diversity within restoration areas, native shrub species associated with Joshua tree woodland (including Mojave yucca, sage, box-thorn, and buckwheat, as noted in the County General Plan) shall be included in the planting palette.

- Within the proposed fire breaks, no suitable on-site mitigation opportunities exist. However, the HEVMP shall ensure the following:

  1. To prevent the potential spread of fire onto the Project site, the proposed fire breaks shall be maintained clear of vegetative cover through mechanical clearing and selective herbicide use.
  2. If herbicides are used as approved by LACDRP to control vegetation, they shall be applied by a qualified individual and in a manner consistent with the product labeling. Under no circumstances shall herbicides be allowed to pass into any ephemeral drainage.
  3. Under no circumstances shall forb species identified by the California Invasive Plant Council (Cal-IPC) as invasive weeds be allowed to thrive in the fire breaks, or as required by LACFD. Cover of these species, collectively, shall be maintained at or below five percent.

- Within all interior portions of the site within and adjacent to the proposed solar arrays, excluding locations of proposed infiltration basins, no suitable on-site mitigation opportunities would exist. However, the HEVMP shall ensure the following:

  1. To control fugitive dust, vegetative cover of grasses and forbs within the proposed solar arrays shall be maximized.
  2. Vegetation seeded in these areas shall be comprised of low-growing communities such as native grasslands and wildflower fields, to minimize the effects of vegetation management practices on the revegetated areas. Shrub species shall not be used, as these species would be unable to survive continued vegetation trimming.
  3. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in the revegetation efforts.
  4. To promote the growth of local, native plant species, the top 2-6 inches of topsoil removed during Project-related grading and/or excavation shall be stockpiled and spread across disturbance zones after completion of construction in the area.
  5. To ensure that a seed supply is maintained to perpetuate on-site vegetation (e.g., annual grasses and wildflowers), vegetation shall be allowed to grow to a maximum height of 18 inches between February 1 and approximately mid-April prior to mowing to a height of 6 inches (or less) by May 1 (through the following January) as required by the LACFD.

6. Herbicides shall be approved for use by the County, and herbicide application shall be performed by trained personnel who can identify the species to be treated. If herbicide is applied, it shall be applied during dry and low wind conditions in order to prevent herbicide drift into non-target areas.

- Within the proposed infiltration basins, no suitable on-site mitigation opportunities exist. However, the HEVMP shall ensure the following:

  1. If herbicides are used as approved by LACDRP to control vegetation (i.e., non-native vegetation), they shall be applied by a qualified individual and in a manner consistent with the product labeling. Under no circumstances shall herbicides be allowed to pass into any ephemeral drainage.
  2. Under no circumstances shall forb species identified by Cal-IPC as invasive weeds be allowed to thrive in the infiltration basins, or as required by LACFD. Cover of these species, collectively, shall be maintained at or below five percent.

- Within all portions of the transmission line route to be impacted during installation of transmission line poles and temporary stringing sites, the HEVMP shall ensure the following:

  1. Under no circumstances shall ground disturbance occur within 25 feet of an existing Joshua tree. In applicable areas, Joshua tree avoidance zones shall be delineated with high-visibility construction fencing.
  2. All areas of temporary ground disturbance shall be revegetated with appropriate plant communities native to the Project region, such as native grasslands, wildflower fields, desert scrub, rabbitbrush scrub, desert saltbush scrub, and Joshua tree woodland.
  3. Where impacts would occur in existing agricultural lands outside the Applicant's ownership, it is presumed that agricultural practices would resume after completion of construction. Therefore, revegetation shall not be required in these areas.
  4. If earthwork is proposed in areas where native vegetation exists, the top 2-6 inches of topsoil removed during Project-related ground clearing shall be stockpiled and spread across disturbance zones after completion of construction in the area.
  5. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in the revegetation efforts.
  6. The HEVMP shall include provisions to minimize the effects of transmission line maintenance on biological resources, including a requirement that no Joshua trees shall be removed during such maintenance.

In addition to the location-specific requirements set forth above, the HEVMP shall also ensure that the following standards are met or exceeded within the Project site as a whole:

1. The HEVMP shall identify appropriate locations for creation of rabbitbrush scrub, California annual grassland, and wildflower fields, the three most abundant existing natural communities on-site, within avoided portions of the Project site. In total, 101 acres of on-site mitigation shall be provided.
2. Performance monitoring of the on-site enhancement and revegetation areas shall be monitored approximately quarterly, in January, April, June, and November, and a report detailing the monitoring results shall be submitted to the LACDRP annually. Monitoring and reporting shall be required for a period of five years and until such time as performance standards are achieved. The HEVMP shall contain contingency measures identifying corrective actions required in the event that the performance standards are not met.
3. All percent cover standards shall be evaluated during the spring biomass peak.
4. Anti-coagulant rodenticides shall not be used within the Project site or along the proposed transmission line route.

The HEVMP shall be submitted to the LACDRP for review and approval prior to issuance of a grading permit.

MM 5.7-2: Off-site Mitigation for Loss of Habitat. Within one year of Project approval or prior to the installation of 50 MW of photovoltaic solar panels, the Applicant shall provide a minimum of 450 acres of off-site mitigation land to be restored, enhanced, and maintained according to the requirements of this mitigation measure, and shall be preserved as open space in perpetuity. Within 45 days of acquiring the mitigation land(s), the Applicant shall record a permanent deed restriction on the mitigation land(s) to be preserved as open space. The deed restriction language shall be submitted to LACDRP for review and approval prior to recordation. Alternatively, should a conservation easement on the mitigation land(s) be offered, the permanent conservation easement(s) shall be recorded to the satisfaction of LACDRP.

The off-site mitigation land shall not exceed 10 separate fragments and shall be acquired adjacent to existing public lands, or within or adjacent to SEAs within the Antelope Valley or surrounding foothills. At least 225 acres of the mitigation land shall be acquired in the vicinity of the Antelope Valley California Poppy Reserve, including lands in or adjacent to SEA #57, or lands connecting the Poppy Reserve to the Angeles National Forest. An additional 75 acres shall be acquired within this same area, or in or adjacent to SEA #60, or adjacent to the Arthur B. Ripley Woodland State Park.

The Applicant shall establish a fund sufficient for the restoration, enhancement, and maintenance of the mitigation land(s) until such time when the mitigation land(s) become self-sustained and meet the requirements of this mitigation measure. The fund shall be established within 90 days of mitigation land(s) acquisition in an amount acceptable to the LACDRP.

The selected off-site mitigation lands shall contain vegetation communities similar to those found within the Project site, including rabbitbrush scrub, annual grassland, and wildflower fields. Although the proposed Project would not significantly impact Joshua tree woodland habitat, lands containing this vegetation community shall also be considered desirable due to the County's concern over the continuing loss and degradation of Joshua tree woodlands. The selected lands shall comply with the following mitigation requirements:

1. The subject property shall be located within the greater Project vicinity, generally defined to include the Antelope Valley and surrounding foothills.

2. The subject property(s) shall contain a minimum of 450 acres of land, which shall be either comprised of vegetation communities characteristic of the Antelope Valley (rabbitbrush scrub, annual grassland, wildflower fields, and/or Joshua tree woodlands) or be reasonably capable of being enhanced and converted to such habitat through the use of maintenance and management practices such that the resulting habitat values would be greater than those lost as a result of Project implementation.

3. The subject property(s) shall either contain a minimum of 224.5 acres of wildflower field, or shall be reasonably capable of being enhanced and converted to this vegetation through maintenance and management practices.

4. The subject property(s) shall provide at least 39 acres of contiguous suitable foraging habitat for the burrowing owl, including presence of suitable burrows. If suitable natural burrows are not present within the subject property, artificial burrows shall be constructed in accordance with California Burrowing Owl Consortium (1993) guidelines.

5. The subject property(s) shall contain a minimum of 450 acres of suitable foraging habitat for grassland/scrubland bird species occurring in the Antelope Valley.

6. The subject property(s) shall contain habitat suitable for the Blainville's horned lizard. Within the mitigation site, suitable locations shall be identified for relocation of horned lizards captured and removed from the Project site pursuant to Mitigation Measure 5.7-7. Generally, it is presumed that the wildflower field areas required by item (3) above will be suitable for this species.

7. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in revegetation efforts.

8. The subject property(s) shall be maintained such that invasive forbs (as identified by the Cal-IPC) shall not exceed 5 percent of the vegetative cover.

Within 60 days of recordation of the permanent deed restriction(s) or conservation easement(s), a Restoration, Enhancement, and Maintenance Plan for the off-site mitigation land(s) shall be submitted to LACDRP for review and approval. The plan shall include the restoration, enhancement, and maintenance requirements for each mitigation area, based on the characteristics of the mitigation land and the mitigation requirements described above, and shall also include contingency measures in the event that habitat creation/restoration/enhancement efforts are not successful. The Restoration, Enhancement, and Maintenance Plan shall also describe the performance standards for determining when the mitigation requirements for the lands have been met.

In addition to meeting the requirements detailed above, the following desirable factors shall also be considered when selecting off-site mitigation property(s):

1. Lands located between blocks of protected habitat are desirable locations for off-site mitigation, as protecting these areas can ensure that essential habitat connections remain in perpetuity.

2. Lands containing Joshua tree woodland habitat are desirable locations for off-site mitigation, due to the continuing loss and degradation of this resource.

3. Lands containing junipers are also desirable locations for off-site mitigation, due to the nesting habitat they may provide for some special-status bird species.

4. Lands containing important landscape features, sensitive habitats, or listed species are desirable locations for off-site mitigation, due to the sensitivity of these resources and the general understanding that such elements are indicative of high biological value.

MM 5.7-3: Biological Restrictions on Dust Suppression. Where construction activities are proposed within 100 feet of mapped Joshua tree woodland vegetation or the Joshua tree recruitment area, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect locations where these sensitive resources may be present to the satisfaction of LACDRP. In addition, dust abatement within 100 feet of these areas shall be achieved by water or by chemical dust suppression if authorized by the County and CDFG.

MM 5.7-4: Nesting Bird Surveys Prior to Mowing. Should mowing for vegetation management purposes occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the Project region, or as determined by a qualified biologist), the Applicant shall have weekly nesting bird surveys conducted. These surveys shall be conducted by a qualified biologist, shall commence within 30 days prior to any mowing, and shall be conducted to determine whether any active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the area to be disturbed. The

surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of mowing activities. If mowing is delayed, then additional surveys shall be conducted such that no more than seven days would have elapsed between the survey and mowing. The Applicant or contractor shall provide the biologist with plans detailing the extent of proposed mowing prior to the survey effort.

If active nests are found, mowing within 300 feet (500 feet for raptors) of the nest shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of mowing to avoid an active nest shall be established in the field with highly visible construction fencing, and solar plant personnel shall be instructed on the sensitivity of nest areas. The results of the surveys, including graphics showing the locations of any nests detected, and any avoidance measures implemented, shall be submitted to the LACDRP and CDFG within 14 days of completion of the surveys to document compliance with applicable state and federal laws pertaining to the protection of native birds. Nesting bird surveys shall be conducted in each of the first five years after Project development. At the end of this period, the results of the first five years of surveys shall be submitted to the LACDRP and CDFG. After submittal of the first five-year survey results, the County of Los Angeles, under consultation with CDFG, shall determine whether or not the nesting bird surveys shall continue.

MM 5.7-5: Biological Monitor. Prior to grading, a qualified biologist shall be retained by the Applicant as the biological monitor subject to the approval of the County of Los Angeles. The biological monitor shall ensure that impacts to biological resources are avoided or minimized to the fullest extent possible. During earth moving activities, the biological monitor shall be present to relocate any vertebrate species that may come into harm's way to undisturbed areas of suitable habitat using appropriate methods that would not injure the wildlife. The biological monitor shall have the authority to stop specific grading or construction activities if violations of mitigation measures or any local, state, or federal laws are suspected.

MM 5.7-6: Worker Environmental Education Program. A Worker Environmental Education Program shall be developed for construction crews by a qualified biologist(s) provided by the Applicant. Training materials and briefings shall include but not be limited to: discussion of the value and identification of special-status species, including the burrowing owl and desert tortoise, review of sensitive species likely to occur within the construction area, the Migratory Bird Treaty Act and the consequences of non-compliance with this act, a contact person in the event of the discovery of dead or injured wildlife, and a review of mitigation requirements. The training sessions shall be conducted by a qualified biologist or other individual approved by the biologist. Maps showing the location of special-status wildlife or other construction limitations shall be provided to the environmental monitors and construction crews prior to construction activities. As part of the environmental training, contractors and heavy equipment

operators shall be provided with photographs or illustrations of expected special-status wildlife species so they will able to identify them, and avoid harming them during construction.

MM 5.7-7: Blainville's Horned Lizard Capture and Relocation. Prior to the initiation of ground clearing activities, capture and relocation efforts shall be conducted for the Blainville's horned lizard to the satisfaction of LACDRP. Trapping shall be conducted by a County-approved biologist possessing proper scientific collection and handling permits, and shall include the following steps:

- Prior to initiating the capture and relocation effort, a suitable receptor location shall be identified to receive relocated horned lizards. The receptor locations shall contain suitable habitat for this species, including open, shrub-dominated vegetation. The 45-acre avoidance area near the southern edge of the Project site likely constitutes a suitable on-site receptor location.
- The capture and relocation effort shall take place during the active season (April through October) preceding commencement of ground disturbance activities, when lizards are more likely to be active. Surveys shall be conducted when air temperature immediately above the ground surface is between 70°F (21°C) and 102°F (39°C). All areas proposed for temporary or permanent ground disturbance shall be surveyed for the Blainville's horned lizard.
- Surveys shall be conducted by placing coverboards on the ground 4 to 6 weeks in advance of the survey effort, and checking the area under the coverboards for horned lizards on a weekly basis. Coverboards can consist of untreated lumber, sheet metal, corrugated steel, or other flat material. Captured lizards shall be placed immediately into containers containing sand or moist paper towels and released in designated receptor locations no more than three hours after capture.

If the biologist believes there is high potential for previously relocated lizards to return to the impact sites following relocation, silt fence shall be installed to prevent relocated individuals from reoccupying areas proposed for disturbance.

MM 5.7-8: Pre-construction Nesting Bird Surveys. Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region, or as determined by a qualified biologist), the Applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are

delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. The Applicant or contractor shall provide the biologist with plans detailing the extent of proposed ground disturbance prior to the survey effort.

If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with highly visible construction fencing, and construction personnel shall be instructed on the sensitivity of nest areas. Occupied nests adjacent to the construction site shall also be avoided to ensure nesting success. A qualified biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

The results of the surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, shall be submitted to the LACDRP and CDFG within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

MM 5.7-9: Pre-Construction Wintering Burrowing Owl Surveys. If construction or site preparation activities are scheduled during the non-nesting season of the burrowing owl (typically September through January), the Applicant shall retain a qualified biologist to conduct wintering burrowing owl surveys within the area to be disturbed. The survey shall be conducted no more than 21 days prior to commencement of construction activities in the area. During the construction period, the results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, shall be submitted to the LACDRP and CDFG on a monthly basis. If active burrows are detected, the required avoidance measures shall conform to the following:

- If burrowing owls are observed using burrows during the non-breeding season, occupied burrows shall be left undisturbed, and no construction activity shall take place within 300 feet of the burrow where feasible (see below).
- If disturbance of owls and owl burrows is unavoidable, owls shall be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with CDFG protocols (CDFG 1995). Specifically, exclusion devices, utilizing one-way doors, shall be installed in the entrance of all active burrows. The devices shall be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows shall then be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the owls

have been successfully excluded from the disturbance area, as determined by a qualified biologist.

- If construction activities must be initiated in any area of the site during the burrowing owl breeding season (typically February through August), pre-construction surveys for burrowing owls shall be conducted. Any active burrowing owl burrows found at this season shall not be disturbed. Construction activities shall not be conducted within 300 feet of an active burrow at this season.

MM 5.7-10: Burrowing Owl Management Plan. Prior to issuance of a grading permit, a habitat management plan for the burrowing owl shall be developed for portions of the site supporting suitable habitat for burrowing owl and away from Project facilities and the solar panel arrays. Specifically, this plan shall be developed for implementation in the undeveloped areas surrounding Drainage A and in the southernmost portion of the Project site, near West Avenue E. At a minimum, the plan shall include the following elements:

- If occupied burrows are to be removed, the plan shall contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations within Drainage A and Drainage C that would compensate for the burrows removed.
- A methodology for the eviction and passive relocation of any owls from the impact area to proactively established artificial burrows.
- Provisions for vegetation management, specifying the maximum allowable vegetative cover adjacent to established artificial burrows and the methodology to be used in maintaining the appropriate cover.
- Measures prohibiting the use of rodenticides.
- The plan shall specify a minimum of 6.5 acres of suitable foraging habitat to be preserved or created through revegetation and restoration practices for every active burrowing owl burrow within the Project site. These mitigation areas shall not be located in areas shaded by the proposed solar arrays, and shall not be subject to vegetation mowing or other fuel management practices. Foraging areas shall be located adjacent to suitable natural or artificial burrow locations.

The Burrowing Owl Habitat Management Plan may be prepared and presented either as a stand-alone document or as a component of the HEVMP required by Mitigation Measure 5.7 1, and shall be submitted to the LACDRP and CDFG for review and approval prior to issuance of a grading permit for the Project.

MM 5.7-11 Facility Lighting. Project facility lighting shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields. The lighting plan shall be submitted to LACDPW for review and approval.

MM 5.7-12: Desert Kit Fox. To avoid injury or mortality of the desert kit fox, preconstruction surveys shall be conducted for this species concurrent with the pre-construction nesting bird surveys required by Mitigation Measure 5.7-4. A qualified biologist shall perform pre-construction surveys for kit fox dens in the Project site and along the proposed transmission line route, and shall survey all areas where Project facilities, transmission line poles, grading, mowing, equipment access, or other disturbances are proposed. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active. Inactive dens in areas that would be impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by desert kit fox. Active and potentially active dens in areas that would be impacted by construction activities shall be monitored by the biological monitor for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand to prevent reuse. If tracks are observed, the den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the kit fox from continuing to use the den. After verification that the den is unoccupied, it shall then be excavated and backfilled by hand to prevent reuse, while ensuring that no kit fox are trapped in the den. The Applicant shall submit a report to the LACDRP and CDFG within 30 days of completion of the kit fox surveys describing the survey methods, results, and details of any dens backfilled or foxes observed.

MM 5.7-13: Pre-construction Desert Tortoise Surveys. Within 30 days prior to construction-related initial ground clearing and/or grading, the Applicant shall retain a qualified biologist to conduct surveys for signs of occupancy by the desert tortoise. Surveys shall be conducted on foot, and intended to detect any live tortoises or their carcasses, burrows, palates, tracks, or scat. Should any desert tortoise sign indicating the presence of desert tortoise be detected, the Applicant shall not proceed with ground clearing and/or grading activities in the area of the find and shall contact the USFWS and CDFG to develop an avoidance strategy.

The results of the pre-construction surveys, including graphics showing the locations of any tortoise sign detected, and documentation of any avoidance measures taken, shall be submitted to the USFWS, CDFG, and LACDRP within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable federal and state laws pertaining to the protection of desert tortoise.

2.7 CULTURAL RESOURCES

Potential Effect:

The Project would have potentially significant impacts to cultural resources if it impacted archaeological, paleontological, or historic resources, or disturbed any human remains.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

A Phase I cultural resource survey and literature search was conducted on the Project site and transmission line route, and identified 25 known archaeological sites, 43 isolates, and one potentially historic property on the Project site, and one archaeological site in the area of potential effect along the proposed transmission line route. Additionally, ground-disturbing construction and operation activities have the potential to disturb, damage, or destroy known and unknown (i.e., buried) archaeological sites. If significant archaeological sites are avoided and preserved during construction activities, the resources could still be indirectly yet significantly impacted by operational activities. Ground disturbing construction activities have the potential to disturb, damage, or destroy significant (as defined by CEQA Guidelines, Section 15064.5) undiscovered archaeological sites. As a result, Mitigation Measures 5.8-1 through 5.8-5, and 5.8-7 are proposed to avoid, perform Phase II testing and potential Phase III data recovery, and provide construction monitoring, training, and contingency plans (regarding human remains, if encountered), such that impacts to known and unknown archaeological resources would be less than significant.

The Project area contains surficial exposures consist of Quaternary Alluvium derived as fan deposits from the mountains to the southwest. These deposits are usually coarse and derived from igneous rocks, and typically do not contain significant vertebrate fossils (i.e., paleontological resources). No paleontologically sensitive rock formations have been identified in the proposed Project area. In the unlikely event that paleontological resources are identified during earth disturbance activities, Mitigation Measure 5.8-6 Paleontological Resource Protection (below) would be provided to protect any such resources should they be encountered.

No significant standing historic structures or built environment is present on the Project area; therefore, no impacts are anticipated. One historic period property (Larsen Ranch) was identified on the Project site, but was deemed not eligible for listing as a historic resource.

The Phase I cultural resource surveys and literature searches conducted for the Project area did not identify any known human remains. However, the potential exists for buried, undiscovered human remains to become disturbed, damaged, or destroyed during ground disturbance activities; therefore, the Project would implement Mitigation Measures 5.8-5 (Human Remains), which would result in less than significant impacts.

Implementation of the following feasible mitigation measures as identified in the Final EIR, would reduce potential Project impacts to cultural resources to less than significant levels:

MM 5.8-1: Avoid Archaeological Sites. Archaeological sites within the proposed Project area shall be avoided and protected from future disturbance or evaluated for significance and mitigated, as appropriate, to the satisfaction of the Los Angeles County Department of Regional Planning (LACDRP).

MM 5.8-2: Phase II Testing/Phase III Data Recovery. Prior to construction, Phase II testing and evaluation shall be conducted at all unavoidable prehistoric archaeological sites in the proposed Project area to determine their significance under Section 15064.5 of CEQA. Sites determined eligible for the California Register of Historic Resources (CRHR) shall either be avoided and protected from future disturbance, or a Phase III data recovery plan shall be prepared and implemented prior to construction to the satisfaction of LACDRP. All archaeological collections, technical reports and related documentation shall be curated at a curation facility approved by the County of Los Angeles.

MM 5.8-3: Archaeological Monitoring. Prior to construction, an archaeological monitoring plan shall be prepared and implemented to the satisfaction of LACDRP. A qualified archaeological monitor shall be present during all ground disturbing activities, including vegetation clearing, grubbing, grading, filling, drilling, and trenching. In the event that any prehistoric or historic cultural resources (chipped or ground stone lithics, animal bone, ashy midden soil, structural remains, historic glass or ceramics, etc.) are discovered during the course of construction, all work in the vicinity shall halt, and the archaeologist shall record the resources on the appropriate California Department of Parks and Recreation (DPR) 523 Series Forms, evaluate the significance of the find, and if significant, determine and implement the appropriate mitigation, including but not limited to Phase III data recovery and associated documentation to the satisfaction of LACDRP. Such activities may result in the preparation of additional Phase II and Phase III technical reports. After ground-disturbing construction activities have been completed, an archaeological construction monitoring report shall be completed and submitted to the LACDRP.

MM 5.8-4: Native American Monitor. A Native American monitor (Tataviam/Fernadeno Band of Mission Indians) shall be notified prior to construction and allowed the opportunity to be present during all ground disturbing activities, including

vegetation clearing, grubbing, grading, filling, drilling, and trenching. In the event that any sacred site or resource is identified, a Native American monitor shall be retained to divert construction activities to another area of the Project site while a proper plan for avoidance or removal is determined to the satisfaction of the LACDRP.

MM 5.8-5: Human Remains. In the event human remains are encountered, construction in the area of the finding shall cease, and the remains shall stay in situ pending definition of an appropriate plan. The Los Angeles County Coroner (Coroner) shall be contacted to determine the origin of the remains. In the event the remains are Native American in origin, the NAHC shall be contacted to determine necessary procedures for protection and preservation of the remains, including reburial, as provided in the State of California Environmental Quality Act (CEQA) Guidelines, Section 15064.5(e), "CEQA and Archaeological Resources," CEQA Technical Advisory Series.

MM 5.8-6: Paleontological Resources Protection. In the event paleontological discoveries are encountered by the cultural monitors, all excavation shall cease in the area of the find and a paleontologist shall be retained, who shall devise a plan for recovery in accordance with standards established by the Society of Vertebrate Paleontology. At least one of the on-site cultural monitors during construction shall have familiarity and expertise in paleontological resources and have the ability to recognize significant vertebrate paleontological resources. Any paleontological resources shall be documented and submitted to the Natural History Museum of Los Angeles County, or any other accredited institution (i.e., San Bernardino County Museum, UCLA Dept of Earth and Space Sciences) that will accept paleontological resources for curation.

MM 5.8-7: Construction Worker Training. Prior to construction, the qualified archaeological monitor or qualified designee shall conduct a brief educational workshop such that all construction personnel understand monitoring requirements, roles and responsibilities of the monitors, and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources. The construction worker training shall include an overview of potential cultural and paleontological resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to a designated on-site cultural monitor for further evaluation and action, as appropriate.

2.8 AGRICULTURAL RESOURCES

Potential Effect:

The Project would significantly impact agricultural resources if it converted substantial areas of Farmland (Prime Unique, or Farmland of Statewide Importance), or conflicted with zoning, agricultural use, or Williamson Act contracted lands.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

As currently mapped under 2008 data from the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP), the Project site is characterized to contain 10.8 acres of Prime Farmland; however, this area does not meet the CDOC definition, which states that Prime Farmland "must have been used for irrigated agricultural production at some time during the four years prior to the mapping date." The area considered as Prime Farmland according to the CDOC FMMP 2008 data designates the location of the previous pistachio orchard, which was last irrigated in approximately 1978, and had never cropped (i.e., never produced pistachios). Los Angeles County defines "Farmland of Local Importance" to be "producing lands that would meet the standard criteria for Prime or Statewide but are not irrigated" (CDOC 2004). Based on the CDOC criteria and the County's adopted definition, the 10.8 acre area, which was last irrigated in 1978, was incorrectly designated as Prime Farmland in the CDOC 2006 data. The abandoned pistachio orchard would instead qualify as Farmland of Local Importance. The Project site does not contain Unique Farmland or Farmland of Statewide Importance. As a result, construction and operation of the proposed solar facility on the Project site would not be expected to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Impacts would be less than significant.

Construction of the transmission line would result in temporary disturbance to approximately 91,235 square feet or 2.1 acres of Prime Farmland, a portion of which would be returned to agricultural use following construction. The transmission line would cause a permanent disturbance resulting from the pole concrete foundations and access paths, to 36,000 square feet (0.83 acre) of designated Prime Farmland. The transmission line's permanent disturbance would represent 0.0001 percent of the total Prime Farmland in Kern County (640,039 acres). This amount of permanent disturbance is considered negligible; therefore, the proposed off-site transmission line would result in a less than significant impact to convert important farmland, including Prime Farmland. No Unique Farmland or Farmland of Statewide Importance would be impacted by the transmission line.

The Project would be considered a use consistent with the Los Angeles County Zoning Code (January 13, 2009) with issuance of a conditional use permit (CUP) (Chapter 22.24.150[A]). The off-site transmission line is determined to be a compatible use with the areas traversed in Kern County, which are agricultural zoned.

In Kern County, approximately 5 transmission line poles are located on a parcel under Williamson Act contract. Kern County is authorized to review certain power generation projects such as the proposed Project for compatibility on Williamson Act contracted lands. The Williamson Act provides that "electrical facilities" are compatible uses on agricultural land under contract (Gov. Code Section 51238(a)(1)). The proposed installation of five (5) transmission poles would be compatible with the principles enumerated in Section 51238.1 of the Williamson Act, as the installation of the transmission poles would not significantly compromise, displace, or impair agricultural uses of the contracted parcel. Additionally, the proposed transmission line would not require cancellation of any Williamson Act contract (per Government Code Section 51238(a)(2)).

The following mitigation measure provides for Kern County review of the transmission line portion within Williamson Act contracted lands.

Mitigation Measure 5.9-1: Transmission Line Williamson Act Review (Kern County). Prior to the construction of the proposed transmission line route within any Williamson Act contracted lands in Kern County, the Applicant shall submit a written site description, along with a plot plan of the proposed transmission line route within the contracted land to the Kern County Planning Department for review and approval.

2.9 VISUAL QUALITIES

Potential Effect:

The Project would have significant visual impacts to the Project area if it resulted in substantial adverse impacts to the viewshed, regional riding and hiking trails, and scenic vistas, create a new source of substantial light and glare, and be considered out-of-character in comparison to adjacent uses.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

Construction of the Project would involve use of heavy equipment, storage of materials at laydown and work areas, temporary construction structures, and active construction work. These activities however, would be transitory, and would generally limited to active work areas during daylight hours. These construction characteristics are temporary, and would not be expected to significantly obstruct or interfere with views in the viewshed.

During operation, major features at the Project facility that would potentially be visible include rows of solar arrays, which have a maximum height of 15 feet), and internal road network (unpaved), a 20,000 square foot operations and maintenance building (peak height of approximately 28 feet), firewater tanks, a substation, electrical inverters and medium-voltage transformers (up to 8 feet in height), perimeter fencing, and transmission line structures (tubular steel pole). The Project facility would result in moderate changes to the viewshed due to the increased presence of manmade structures with elevational relief.

Additionally, the Project includes several design and enhancement features to address the foreground views of the facility along SR-138. These features consist of the following:

Use of Horizontal Trackers Along SR-138. In the event that tracker technology is selected, horizontal trackers, which have lower elevational relief (approximately 6 to 11 feet at the highest point, depending on the manufacturer) compared with tilted trackers (12 to 15 feet above ground surface) will be used approximately 1,000 feet into the solar field from the fence line north and south of SR-138 to reduce the visibility of the facility from SR-138. Fixed-tilt panels would have a lower profile than either horizontal or tilted trackers.

Landscaping Along SR-138. A plan for installing a 10-foot wide vegetated area of Joshua trees and/or other native yucca trees, and native shrubs (e.g., Great Basin sage, rabbit brush, and four-wing salt brush) along the outside of the facility fence lines north and south of SR-138 will be prepared prior to construction. The landscaping will be installed within 14 months of the commencement of construction activities. The vegetation will be initially watered as necessary (e.g., for one to two years) to facilitate establishment, and will be maintained and monitored thereafter to promote successful, long-term establishment of the native vegetation.

Facility Setbacks. The proposed site layout includes setbacks from SR-138, which is currently a two-lane highway. The facility fence line is set back approximately 120 feet from the centerline of the SR-138, on the facility areas north and south of SR-138. The proposed arrays would be further set back by approximately 30 feet from the fence line, for an estimated total of 150 feet minimum from the centerline of SR-138.

The Project site does not contain public regional hiking or riding trails, and would not obstruct views from such trails in the Project area. Views of the developed Project from trails in the California Poppy Reserve and Arthur B. Ripley Desert Woodland State Park (middle-ground views) were simulated based on developed Project conditions, and indicated less than significant visual effects.

The Project would not involve substantial activity during operation, and as indicated on the Project simulations, would contribute moderate changes in bulk and height, which would result in less than significant changes to the character of adjacent uses. While the

Project's impacts would be considered less than significant, implementation of Mitigation Measures 5.10-3 (Building and Equipment Paint) and 5.10-4 (Screening Vegetation Landscaping Plan) would further ameliorate these effects.

Some night lighting could temporarily occur in the event that construction work at night is needed in order to meet the construction schedule. In the event that nighttime work is needed, the Project work would be performed using the minimum illumination needed to perform the work safely. All lighting would be directed downward and shielded to focus illumination on the desired work areas only, and to ensure that light does not trespass onto adjacent properties.

The solar arrays are photovoltaic, and are therefore designed to absorb and not reflect light, and would not create reflective surfaces or the potential for glint/glare. During operation, lighting would be designed to provide the minimum illumination needed to achieve safety and security objectives, and would be directed downward and shielded to focus illumination on the desired areas only, and would be installed to ensure that light does not trespass onto adjacent properties. Lighting would be provided at the O&M building, parking lot, main plant access road, pump and similar equipment locations, and substation control structure. Lights at the main plant access gate, doorways, and the O&M building parking would remain in the on position, and would be light-activated to automatically come on in the evening and shut off in the morning. Other lights would normally be shut off and turned on only when worker activity requires. The Project would implement Mitigation Measure 5.7-11, Facility Lighting, which would ensure that nighttime lighting would result in insignificant effects.

Due to the low to moderate profile of the construction equipment and temporary nature of the activities proposed, construction of the site would not be expected to substantially diminish the visual quality (i.e., vividness, intactness, and unity) of the Project site from areas of high viewer exposure such as motorists travelling along SR-138 and, to a lesser extent, 170th Street West. As a result, construction activities at the Project site would not be expected to result in substantial impacts to visual quality.

The Project would consist of generally low relief structures, such that the Project components would maintain views into the distance, as demonstrated on Project simulations, and would result in less than significant impacts to scenic vistas. Additionally, due to proposed Project design, operation of the Project would result in less than significant effects to foreground views. As a result, the Project facility would not be expected to result in substantial impacts to visual quality. Similarly, the Project's generally passive use, and facility appearance, as described above, from public viewing locations, would not be considered an urban use. The proposed Project and transmission line would maintain views of the rural landscape and the distant mountains. As a result, the Project would result in an adverse, but less than significant change to character.

The Project's less than significant visual impacts are further reduced with the adoption of the following feasible mitigation measures:

MM 5.10-1: Visual Screening During Construction. Prior to any construction activity within the vicinity of SR-138, temporary screening of construction and staging areas (e.g., via vegetation, or fencing with fabric or slats) shall be installed to minimize visual effects from construction as required by LACDRP.

MM 5.10-2: Construction Housekeeping. During construction, the development site shall be maintained. The Project facility construction site and off-site transmission line route work areas shall be kept clean of debris, trash, or waste.

MM 5.10-3: Building and Equipment Paint. All proposed on-site structures and appropriate equipment shall be neutral colors and non-reflective, as approved by the LACDRP.

MM 5.10-4: Screening Vegetation Landscaping Plan and Maintenance. Prior to issuance of a grading permit, the Applicant shall submit a landscaping plan for the 10-foot-wide strip of Project screening vegetation proposed along both sides of SR-138, to the LACDRP for review and approval. The Plan shall be certified by a registered landscape architect, and shall identify use of temporary irrigation, and the areas on both sides of SR-138 at the Project site to be planted with Joshua trees and/or other native yucca species, and native shrub species, in compliance with the County Drought-Tolerant Landscaping Ordinance. The landscaping shall be installed within 14 months of the commencement of construction activities. The vegetation shall be maintained via selective thinning and removal of invasive weeds and monitored thereafter to promote successful, long-term establishment of the native vegetation to the satisfaction of LACDRP. The landscaped area shall also be maintained free of trash and debris for the Project lifetime to the satisfaction of LACDRP.

MM 5.10-5: Maintenance of SR-138 Caltrans and County Easements. The areas on both sides of the existing Caltrans right-of-way for SR-138 offered for dedication in fee simple by the Applicant to Caltrans and the irrevocable 10-foot-wide slope easement on both sides of the 200-foot-wide Caltrans right-of-way offered to the County as described in Section 4.2 of [the Draft] EIR shall be maintained free of trash and debris on an as-needed basis to the satisfaction of LACDRP. The dedicated area for Caltrans shall be maintained by Applicant until such time the deed for the applicable area is transferred to Caltrans, and the slope easement area for the County shall be maintained by the Applicant until such time that the County installs improvements.

2.10 TRAFFIC AND ACCESS

Potential Effect:

The Project would have potentially significant traffic impacts if it resulted in hazardous traffic conditions, inadequate emergency access, or had a detrimental effect on existing pavement of 170th Street West.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

Based on analysis and modeling of current and projected future conditions, the proposed Project construction and operation traffic (996 daily one-way trips at peak for pile foundation scenario [worst case], and 32 daily one-way trips, respectively) would allow roadway segments and intersections in the Project area to operate at acceptable Level of Service (LOS), LOS C or better. Mitigation Measure 5.11-3, Limit 50 Percent of Truck Deliveries to Off-Peak Hours, would manage construction truck deliveries to the Project site. As a result, the Project would result in less than significant impacts to roadway segment and intersection LOS. The Project construction and operation were determined to result in less than significant impacts to trips added onto a mainline freeway link or Congestion Management Plan (CMP) system.

Construction of utility crossing of SR-138 and 170th Street West (i.e., 34.5 kV electric line over SR-138; and 34.5 kV lines across 170th Street West from the east side to the proposed on-site substation on the west side) may potentially encroach into the traveled roadway causing short-duration traffic impacts to residents/employee or emergency vehicles in the area. During installation of transmission poles and lines, emergency access along 170th Street West and residences adjacent to temporary transmission line work zones along 170th Street West could be temporarily impacted (i.e., 1-2 days maximum at any one location). In the event of roadway closures, traffic control measures would be implemented in accordance with Mitigation Measure 5.11-1 (below) to ensure public and emergency access, and work safety. During operation, in the event the transmission line requires maintenance or repair involving equipment and use of the public road ROW, the affected roadways may require temporary closure, and the Project would implement traffic control measures in accordance with MM 5.11-1 to ensure public and work safety.

Project-related construction equipment traffic could increase wear and/or cause damage to the existing pavement along 170th Street West, which consists of 2 inches of asphalt on approximately 3 inches of soil mix. Construction impacts are considered to be potentially

significant absent mitigation. Implementation of Mitigation Measure 5.11-2 (below) would reduce impacts to less than significant levels.

The potentially significant impacts identified in the Final EIR are mitigated to a less than significant level with adoption of the following feasible mitigation measure:

MM 5.11-1: Provide Adequate Worksite Traffic Control. Prior to any construction activities and/or issuance of required encroachment permits from Caltrans and Los Angeles and Kern counties, the Applicant shall prepare worksite traffic control plans for review and approval from Caltrans, the LACDPW and the Kern County Resource Management Agency, Roads Department. The plans shall include: 1) the location and usage of appropriate construction work warning signs that shall be placed in accordance with the California Manual on Uniform Traffic Control Devices (Caltrans 2010); 2) proper merging taper and/or shifting lane schematics; and 3) adequate work area and buffer zone designation as well as proper location and conduct of flagmen and the traffic management supervisor at the installation worksite area. The Project worksite traffic control plans shall be coordinated with driver and worker safety in mind. Where the observed speed limit on affected roadways is 55 MPH or more, the plans shall incorporate and implement the following minimum standard requirements per the Work Area Traffic Control Handbook (WATCH):

- A Type C flashing arrow pane shall be used for each closed lane.
- The minimum height for traffic cones shall be 28 inches.
- A minimum of three advance warning signs shall be posted.
- Consideration of advanced safety enhancement measures shall be taken into account for workers in the work zones.

The above safety and traffic control measures identified in the traffic control plans shall also be implemented at pole installation sites within the public road ROW and/or roadway crossings at a minimum.

Additionally, the County, including the LACFD Fire Stations 78, 112, and 140 shall be notified at least three days in advance of any street closures that may affect fire and/or paramedic responses in the area. Applicant shall provide alternate route (detour) plans to the County, including three sets to the LACFD, with a tentative schedule of planned closures, prior to the beginning of construction.

MM 5.11-2: Document Pre-and Post-Project Construction Pavement Condition of 170th Street West and Pay Fair Share. Prior to issuance of a grading permit, Applicant shall document and submit all required information and/or material pertaining to the pavement conditions of 170th Street West including the formula for calculating the Project's fair share of any repair and/or reconstruction of 170th Street West to the

satisfaction of the LACDPW. Applicant shall reimburse the County of Los Angeles for the cost of any repairs and/or reconstruction of 170th Street West attributable to the Project as agreed to by the LACDPW. The timing of any necessary repairs and/or reconstruction of 170th Street West and the required payment by Applicant shall be determined by LACDPW.

MM 5.11-3: Limit 50 Percent of Truck Deliveries to Off-Peak Hours. During the construction phase of the Project, Applicant/EPC contractor shall require equipment and material suppliers using trucks to make deliveries to the Project site such that at least 50 percent of associated truck traffic occurs during off-peak hours.

2.11 FIRE PROTECTION SERVICES

Potential Effect:

The Project would have significant impact fire protection services if it created staffing or response time problems or result in any special fire problems.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

During construction, workers would be temporary, and would not be expected to relocate to the Project area; therefore, the construction of the Project is not anticipated to create significant changes to the local population that would increase the level of demand on fire protection services. During operation, the Project is anticipated to require 16 full-time personnel to operate, maintain, and provide security enforcement measures at the Project site. The employees are planned to be hired primarily from the available local workforce, and would not be expected to result in significant changes to the local population that would increase the level of demand on the fire department services such that additional staff would be needed.

The Project is not located within a Very High Fire Hazard Severity Zone. The Project facility and transmission line would be designed in conformity with applicable safety, fire flow, system protections, and fire suppression systems defined by the Los Angeles County Fire Department and applicable fire protection standards, and would implement a Fire Protection and Prevention Plan (Mitigation Measure 5.4-1) that would establish standards and practices to minimize the risk of fire danger and fire response during Project construction and operation. In the event that partial street closures are required for construction or maintenance, a Worksite Traffic Control Plan (Mitigation Measure 5.11-1, Provide Adequate Worksite Traffic Control) would be implemented, which would

entail advance notification to the Fire Department and department coordination, provision for safe access, and use of flagmen and detours where needed. The Project design, fire protection considerations, and traffic considerations would be expected to result in less than significant impacts to fire service staffing and response times.

2.12 SHERIFF SERVICES

Potential Effect:

A project would have a potentially significant effect on sheriff services in the event that the project increases the demand for additional sheriff staffing or facilities, or significantly increases law enforcement response times, or would be subject to special law enforcement problems.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment. .

Facts Supporting the Finding:

The proposed Project and transmission line does not involve residential uses, would not be considered to cause growth-inducing effects that would significantly increase population. The Project would provide security design and personnel during construction and operation. As a result, the Project would not result in a significant increase in demands for law enforcement. In the event that partial street closures are required for construction or maintenance, a Worksite Traffic Control Plan (Mitigation Measures 5.11-1, Provide Adequate Worksite Traffic Control) would be implemented, which would entail provision for safe access and use of flagmen and detours where needed, such that the Project would result in less than significant effects to law enforcement response times.

The Project is not located within an area of special law enforcement problems. The Project would be designed and operated with security measures, which include security fencing, controlled access gates, and 24-hour staffing, including full-time security employees who would conduct regular site security patrolling. As a result, the Project is anticipated to result in less than significant effects associated with special law enforcement problems.

2.13 UTILITY SERVICES

Potential Effect:

The Project would have potentially significant impacts to utility services if the Project construction and operation would result in a significant inadequate water supply, landfill capacity, electrical services, and natural gas services.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The proposed Project site and surrounding area is not currently served by a public domestic water supply system. The Project proposes to utilize groundwater from on-site wells to supply the Project's short-term construction water needs and long-term operational water needs. The Project overlies the Antelope Valley Groundwater Basin ("Basin"). There are no current legal restrictions on the groundwater pumping in the Basin. An owner of property overlying a groundwater basin has an "overlying" right to reasonable and beneficial use of water from the basin. The Project overlies the Basin; as such, the owner has an overlying right to use water from the Basin for the proposed Project, which would be reasonable and beneficial, as the Project will provide a new source of renewable energy in California. There is an adequate groundwater supply in the Project area within the western portion of the Basin to meet the Project's water use based on historic groundwater contour data, well records in the Project area, and a well investigation/pump test performed on an on-site groundwater well. In addition, according to the Antelope Valley Integrated Regional Water Management Plan, groundwater is considered a reliable water source in the Antelope Valley Groundwater Basin.

The Antelope Valley Groundwater Basin is in adjudication, which is expected to determine all groundwater pumping rights in the Basin. Since groundwater extractions have exceeded the estimated natural recharge of the Antelope Valley Groundwater Basin, the Basin may be in overdraft. However, based on available data analyzed in the Draft EIR, water levels within the Project area have generally risen since the 1960s and appear to have stabilized. The high historical water usage for the Project site is approximately 776 acre feet per year (AFY) during a period that may be contemplated by the Adjudication. The proposed Project's construction water usage of 150 AFY (over a period of approximately 38 months) equates to less than 20 percent of the high historical groundwater usage at the Project site. The Project's long-term operational need of 12 AFY equates to less than 2 percent of the upper level of historical groundwater usage at the Project site. Based on the historic groundwater usage at the Project site, it is anticipated that while an allocation of groundwater in the Adjudication may be

significantly less than the upper level of historical groundwater usage of 776 AFY for the Project site, it is reasonably likely that the Project site's allocation would meet the Project's operational water requirements of 12 AFY. As an overlying owner with historic usage, the Applicant may assert defenses to claims of prescription and may secure a correlative right to groundwater as an overlyer in an amount sufficient to supply the Project. In addition, the Project's temporary water use during construction (150 acre feet per year ("AFY") for approximately 38 months) would represent approximately 0.18 percent of the Basin's total sustainable yield. The Project's water use during operation of the Project (12 AFY) would represent approximately 0.01 percent of the Basin's total sustainable yield. Therefore, because the Project's water usage would be a significant reduction from the amount of groundwater reasonably estimated to be allocated to the Project site, and would not likely exceed the Project's correlative share of the native safe yield, the Project would not result in a significant impact related to water supply.

Given the uncertainty inherent in the Adjudication, several reasonably foreseeable alternative water sources have been identified. These include the acquisition of transferable groundwater rights from a landowner and/or public water supplier with transferable groundwater rights; payment for an assessment to the Watermaster to pump groundwater from the Basin, which would be used to pay for imported water to be injected into the Basin; or from purchasing and trucking fresh and/or reclaimed water from wholesalers, retailers, or recycled water suppliers in the general Palmdale/Lancaster area Based on the air and traffic analyses conducted for possible trucking of water, less than significant impacts to air quality and traffic impacts would result. As a result, the Project would result in less than significant impacts related to water supply.

The Project is not planned to require utility services for gas or propane. The Project would follow requirements under California Government Code Section 4216 to prevent incidents relating to damage of underground utilities, and would coordinate electrical service with Southern California Edison. As a result, the Project would result in less than significant effects to gas and electrical utility services.

During construction, the Project would recycle at least 65 percent of the generated solid waste, for an estimated maximum disposal of 31,028 tons per year ("TPY") of scrap materials, and a one-time generation of 28,553 tons of vegetation debris. During operation, the Project is estimated to generate 31 TPY of office and packaging materials, which would represent 0.0000007 percent of the remaining disposal capacity at the nearest landfill, Lancaster Landfill and Recycling Center. The Project's recycling practices during construction would reduce the amount of solid waste entering landfills, and the Project's overall contribution to solid waste disposal would be expected to be less than significant.

2.14 ENVIRONMENTAL SAFETY

Potential Effect:

The Project would have potentially significant impacts to environmental safety if it created a significant hazard through the routine transport, use, disposal, or accidental release of hazardous materials, if the Project site contained residual soil toxicity, or resulted in electric and magnetic field hazards.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project site may contain hazardous materials associated with past agricultural uses and oil development activities. Contaminants of potential concerns include petroleum-based chemicals, pesticides, and metals, including arsenic, lead, mercury, and hexavalent chromium. An abandoned oil well is reportedly located on the facility site, and may not have been properly abandoned as a result of previous less stringent standards during the time of abandonment. The Project also involves removal of the existing farm residences and related structures that may contain building materials contaminated with hazardous materials, including asbestos and lead. Construction of the Project site and transmission line would require hazardous materials that would be typical of construction projects of this type, including, gasoline, diesel fuel, oils, lubricants, solvents, batteries, detergents, degreasers, paints, ethylene glycol, and welding materials and supplies, including pressurized gases. Project operation would require limited quantities of fuel oil, lubricants, solvents, batteries, janitorial supplies, paint, degreasers, herbicides, pesticides, FM200 fire suppressant, and approximately 84,000 gallons of transformer insulating oil that would be contained within electrical transformers and switches at the facility.

Operation of the Project transmission line involves transmission of high-voltage current, which would generate electric and magnetic field (EMF). The Applicant has committed to managing the electric and magnetic field strengths associated with the proposed transmission line(s) by constructing the transmission facilities in accordance with: California Public Utilities Commission (CPUC) Government Order (GO) 95, which addresses shock hazards to the public by providing minimum clearance and maintenance requirements; GO 52 (Rules for Construction and Operation of Power and Communication Lines for the Prevention or Mitigation of Inductive Interference, which manages electric and magnetic field strengths; and GO 131-D (Rules for Planning and Construction of Facilities for the Generation of Electricity and Certain Electric Transmission Facilities), as applicable. Compliance with these requirements would limit potential EMF levels from Project facilities to levels that are consistent with CPUC

policies which consider protection of public health, and Project-related electric shock hazards to acceptable levels.

The following mitigation measures would reduce potential impacts due to hazardous materials contamination during construction and operation to less than significant levels:

MM 5.15-1: Additional assessment, and possibly remediation, of potentially contaminated soils on the Project site. Prior to the issuance of a grading permit, the Applicant shall obtain a site closure letter from the Los Angeles County Fire Department, Health Hazardous Materials Division. The Applicant shall conduct additional site assessment or remediation activities as required by and to the satisfaction of the Voluntary Oversight Program of the CUPA (Los Angeles County Fire Department, Health Hazardous Materials Division).

Additional assessment and/or remediation may include the following:

1) Preparation of applicable Phase II Environmental Site Assessment Work Plans that describe the proposed approach and methods to be used in characterizing shallow soils. The Work Plans shall include the proposed sampling locations, sample collection procedures, analytical methods, quality control measures, and a site-specific health and safety plan. The Phase II ESA(s) shall be submitted to the CUPA for regulatory review and approval.
2) Implementation of the Phase II ESA Work Plan(s) with CUPA oversight.

As necessary, Site Remediation Action Plans shall be developed. Upon CUPA concurrence with the recommendations presented the Phase II ESA(s), remedial action plans shall be prepared for submittal to the CUPA. The remedial action plans shall include the following.

1) Remediation goals and cleanup criteria.
2) Evaluation of corrective action alternatives that compares the effectiveness, feasibility, and cost benefit of each alternative. The remedial action plans shall take into account existing and proposed uses of the Project area.
3) Identification of the preferred alternative with consideration of protection of resources within the Project area.
4) A detailed description of the access points and haul-out routes for remedial activities; remediation methods and procedures; mitigation of dust; minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis. Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers.

MM 5.15-2: A Soil Management Plan for Transmission Line Construction. Prior to issuance of a grading permit, a soil management plan shall be submitted to the CUPA for review and approval. The plan shall include practices that are consistent with the California Title 8, Occupational Safety and Health Administration (Cal-OSHA) regulations, as well as CUPA remediation standards that are protective of the planned use. Appropriately trained construction personnel shall be present during site preparation, grading, and related earthwork activities (e.g., augering) to monitor soil conditions encountered. In order to confirm the absence or presence of hazardous substances associated with former land use, a sampling strategy may be implemented. The sampling strategy shall include procedures regarding logging/sampling and laboratory analyses. The Soil Management Plan shall outline guidelines for the following:

- Identifying impacted soil
- Assessing impacted soil
- Soil excavation
- Impacted soil storage
- Verification sampling
- Impacted soil characterization and disposal

MM-5.15-3: The historic oil well that requires abandonment or re-abandonment shall be abandoned to current standards. Prior to issuance of a grading permit, an investigation into the location of the historic oil well, reportedly located on the proposed Project site shall be conducted. If the well is determined to be located on the Project site, the well shall be inspected. If the well was not abandoned properly, as determined by the California Division of Oil, Gas, and Geothermal Resources (DOGGR), the well shall be re-abandoned to the satisfaction of DOGGR. The Project development plans shall comply with the required setbacks from oil and gas wells as determined by DOGGR and the County of Los Angeles.

MM 5.15-4: Demolition Hazardous Building Materials Assessment and Management Plan. Prior to the commencement of any demolition activity on the Project site, the demolition contractor shall prepare a written Demolition Hazardous Building Materials Assessment and Management Program for review and approval by the CUPA, and/or other appropriate regulatory agency. The Demolition Hazardous Building Materials Management Program shall include an assessment for lead-based paint (LBP) and asbestos-containing material (ACM) as identified in the URS pre-demolition survey report (URS 2010), and the following plans shall be prepared:

- Lead-based Paint Abatement and Management Plan. A LBP Abatement Plan shall be prepared and implemented by a qualified contractor. Elements of the plan shall include the following:

- Containment of all work areas to prohibit off-site migration of paint chip debris.
- Removal or encapsulation of all peeling and stratified LBP on building surfaces and on non-building surfaces to the degree necessary to properly complete demolition activities per the recommendations of the survey. The demolition contractor shall properly contain and dispose of intact LBP on all equipment to be cut and/or removed during demolition.
- Providing on-site air monitoring during all abatement activities and perimeter monitoring to ensure no contamination of work of adjacent areas.
- Cleanup and/or HEPA vacuum paint chips.
- Collection, segregation, and profiling waste for disposal determination.
- Post-demolition testing of soil to assure that soil at the site is not contaminated by LBP.
- Providing for appropriate disposal of all waste.

- Asbestos-containing Materials Abatement and Management Plan. Prior to demolition work that shall disturb identified ACMs, an ACM Abatement and Management Plan shall be prepared. Asbestos abatement shall be conducted during demolition activities, consistent with OSHA and air quality regulations. The Management plan shall include detailed information regarding ACM classification, ACM hazard assessment (the possibility of fiber release from ACM is based on the materials condition, such as friability), ACM inventory information, training and qualification for workers, demolition handling procedures, waste management and disposal procedures, and emergency response procedures (in case of a release of friable materials) licensed asbestos abatement removal contractor shall remove the ACMs under the oversight of a California Certified Asbestos Consultant. All identified ACMs shall be removed and appropriately disposed of by a state-certified asbestos contractor. The proposed Project shall include notification of demolition activities to the Antelope Valley Air Quality Management District.

2.15 LAND USE COMPATIBILITY

Potential Effect:

Project impacts to land use compatibility pertain to the potential for the proposed Project to conflict with plan or zone designations, SEA conformance criteria, or the County Green Building Ordinance.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project site is considered a utility installation, which is considered a use consistent with the Project site's Non-Urban (N-1) land use designation. The Project is considered an allowable use in the Project site's designated zone with issuance of a conditional use permit, and implementation of the Project as conditioned by the County would be expected to be compatible with the zoning designation. Thus, the Project would not be considered inconsistent with the plan designation, and would result in less than significant impacts to zoning consistency.

The Project is not located within an SEA boundary. The Project would implement Mitigation Measures 5.6-2 (Develop and Implement Fugitive Dust Emissions Control Plan), 5.7-11 (Facility Lighting), and 5.18-1 (Pile Driver Orientation), such that the Project would result in less than significant indirect impacts to adjacent SEA areas, and conform with SEA criteria.

The Project is designed with an objective to conserve resources by producing electricity in a manner that consumes low quantities of fossil fuel and water and, thus, would be considered consistent with the intent of the Green Building Ordinance. The Project drainage concept is designed in accordance with the Title 12 Chapter 12.84, LID standards. All on-site vegetation associated with proposed vegetated areas would be planted in accordance with Title 22 Chapter 22.52, Part 21, Drought Tolerant Landscaping requirements. The Project would recycle a minimum of 65 percent of non-hazardous construction and demolition debris, construct the office area of the O&M building in accordance with applicable green building standards, and would follow with other applicable provisions in accordance with Title 22 Chapter 22.52 Part 20, Green Building requirements. Under the Green Building Ordinance, the Project would potentially be required to plant and maintain up to approximately 10,500 trees, which would result in a substantial increase in the Project's water consumption, and would not be considered practical for achieving the intent of the ordinance. As a result, in accordance with the ordinance provisions (Section 22.52.2130.C.5(d) of the County Code), the Project would obtain authorization to modify the tree planting requirements of the Green Building Ordinance. Therefore, the Project would comply with applicable provisions in the County's Green Building Ordinance.

The following mitigation measure identified in the Final EIR provides consistency with the Green Building Ordinance, and results in less than significant impacts to land use:

Mitigation Measure 5.16-1: Tree Planting Modification. Prior to issuance of a grading permit, the applicant shall obtain authorization to modify the tree planting requirements of the Green Building Ordinance from the Director of Public Works and shall comply with all considerations and other terms of the Green Building Ordinance requirements to

the satisfaction of the Director of Public Works (see Sections 22.52.2130.C.5 and Section 22.52.2150 of the County Code).

2.16 GLOBAL CLIMATE CHANGE

Potential Effect:

The Project would significantly impact global climate change if it would result in a significant increase in emission of greenhouse gases.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project proposes to generate approximately 230 MW of clean, renewable electrical power using solar PV technology. Assessment of Project-generated GHG emissions through the Project lifetime (construction and operation phase) indicate that the Project is reasonably expected to reduce carbon dioxide equivalence (CO_{2e}) emissions by over 196,000 metric tons (MT) CO_{2e} per year during operation compared to emissions from an equivalent electrical output using eGrid information (i.e., current electrical supplies to the grid in California). The Project is fully consistent with the CARB Scoping Plan to implement AB 32 and its projected implementation measures, and is expected to result in a net decrease of greenhouse gas emissions within California due to its reduction in carbon intensity of energy generation. As a result, the Project is anticipated to result in less than significant construction and operation impacts to GHG emissions.

2.17 NOISE

Potential Effect:

The Project would have potentially significant noise impacts if it substantially increased ambient noise levels, including temporary or periodic increases.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

During construction, construction equipment will be equipped with appropriate mufflers and maintained in order to reduce noise emission levels. Noise levels from construction activities (substation and O&M construction, Drainage A cutoff walls, and solar fields)

were evaluated, and all activities complied with ordinances, with the exception of the pile driving scenario for the PV structures. Implementation of Mitigation Measure 5.18-1 (Pile Driver Orientation) would reduce pile driving noise levels to meet Los Angeles County Noise Ordinance Standards. Noise levels for construction of the transmission line were evaluated, and were found to be within acceptable noise levels at the nearest residences (sensitive receptors).

Based on evaluation of operational phase activities, including use of tracking drive motors, inverters and transformers, substation, transmission line EMF, and maintenance activities, operation of the Project facility and transmission line were found to have no substantial noise impact to increase ambient noise levels, and would result in less than significant impacts to noise levels.

The potentially significant noise impact identified in the Final EIR for construction noise are mitigated to a less than significant level with adoption of the following feasible mitigation measures:

MM 5.18-1: Pile Driver Orientation. In order to reduce the noise levels generated by the vibratory pile driver and comply with all applicable Los Angeles County noise standards, the pile driver shall be oriented such that the rear of the pile driver faces toward the noise-sensitive receptors when the vibratory pile driver is being utilized within 3,000 feet of the receptors.

MM 5.18-2: Construction Equipment Use of Mufflers. Construction equipment and vehicles shall be fitted with efficient and well-maintained mufflers to reduce noise emission levels. In addition, the Project construction equipment and vehicles shall be maintained according to the manufacturers' instructions and recommendations.

2.18 CHANGE OF CHARACTER

Potential Effect:

The Project would significantly impact change of character if it resulted in a significant change to the existing character of the Project area.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project vicinity consists of a rural and agricultural setting within a high desert climate. The Project, unlike conventional power generation processes, would not require combustion or large mechanical processes to produce electricity, and would generate

minimal air emissions, hazardous materials, and noise. Additionally, the Project consists of generally low-relief structures and design features including setbacks from County and State roadways, selective vegetative screening, and use of lower-relief equipment at foreground views of the facility along SR-138 public viewing locations, and would not be considered an urban use. The proposed Project and transmission line would maintain views of the rural landscape and the distant mountains. As a result, the Project would result in an adverse, but less than significant change to character.

2.19 GROWTH INDUCING IMPACTS

Potential Effect:

Development of the Project has the potential to induce growth by fostering economic or population growth or construction of additional housing either directly or indirectly.

Finding:

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project is designed to meet the increasing demand for clean renewable electricity that is set forth in the California's statutory and regulatory goals to increase renewable power generation and reduce greenhouse gas generation. The Applicant proposes the AV Solar Ranch One Project in response to the State-mandated increases in clean, renewable electricity generation versus conventional fossil-fuel power generation sources.

Data from the California Employment Development Department (EDD) Labor Market Information (LMI) indicate that the regional workforce in Los Angeles and Kern counties are sufficiently large enough to meet the construction (453 workers peak) and operation (16 workers) needs of the Project. As a result, workers are expected to be hired from the project region, and workers would not be anticipated to require relocation into the Project area. As a result, the proposed Project would not directly result in growth in the Project area. Project impacts related to growth inducement would be less than significant.

The proposed Project involves construction and operation of a solar photovoltaic electric generating facility and a privately-owned, 230-kV high-voltage transmission line. The Project does not involve increase or expansion of public services or removal of major obstacles to growth that would increase growth beyond land use plans and regional projections. Therefore, the Project has no impacts related to indirect growth effects.

SECTION 3.0 FINDINGS REGARDING CUMULATIVE ENVIRONMENTAL EFFECTS WHICH ARE NOT SIGNIFICANT OR WHICH HAVE BEEN MITIGATED TO A LESS THAN SIGNIFICANT LEVEL

Pursuant to Section 15130 of the CEQA Guidelines, the following findings and statements of fact identify potentially significant cumulative impacts and the Project's incremental contribution to the impacts discussed in the Final EIR. For the following environmental resource areas, the Project's incremental effect is not cumulatively considerable.

3.1 GEOTECHNICAL HAZARDS

Potential Effect:

Implementation of the Project would result in grading and placement of structures where they may be subject to ground motion could cumulatively expose people and structures to hazardous geotechnical conditions.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project would require grading, which would be performed in accordance with a Grading Plan approved by the Los Angeles County Department of Public Works, and would be performed in conjunction with BMPs to minimize potential impacts due to wind and water erosion. The Project Geotechnical Report (Terracon 2009) identifies geologic conditions and potential geologic hazards to support the engineering design of the Project facility and transmission line. Construction of the Project in accordance with these design and construction measures would reduce geotechnical related hazards from seismic-related hazards (i.e., ground shaking) to a less than significant level. When combined with the impacts of other potential cumulative projects, the proposed Project, as constructed with the required applicable building codes and standards and Geotechnical Engineering Report (Terracon 2009) recommendations, as required by Mitigation Measure 5.2-1, Implementation of Geotechnical Engineering Report Recommendations, would not result in an incremental increase to geotechnical hazards. Additionally, other potential projects would be required to comply with seismic standards consistent with applicable local, state, and federal regulations. As a result, the contribution of the Project would not be cumulatively considerable, and thus, would be less than significant.

3.2 FLOOD HAZARDS

Potential Effects:

Implementation of the Project in combination with the related projects would potentially cumulatively increase the amount of erosion and sedimentation, impervious surface area, and drainage pattern alterations (i.e., flood hazards) in the Project watershed.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The facility would be designed in accordance with Los Angeles County Low Impact Development (LID) standards and LACDPW flood control requirements to conform to the natural local watershed, maintain site drainage patterns, and balance site runoff. Of the identified cumulative projects in the Draft EIR, the Fairmont Butte Motorsports Park and the Southern California Edison (SCE) Tehachapi Renewable Transmission Project (TRTP) Segment 4 500-kV transmission line have the potential to impact the same watersheds as the proposed Project (i.e., Amargosa Creek Watershed and Sacatara Creek-Kings Canyon Watershed). Due to the small footprint and wide spacing of the AV Solar Ranch One and SCE's proposed transmission structures, no potential for cumulative flood hazard related impacts exists with the proposed TRTP project. The EIR for the proposed Fairmont Butte Motorsports Park Project concludes that the motorsports project would not result in any potentially significant flood hazard related impacts (LACDRP 2009). Additionally, the proposed AV Solar Ranch One Project site is generally hydrologically separated from the Fairmont Butte Motorsports Park project site, thus the potential for cumulative flood hazard impacts is limited.

The proposed Project's construction and operation activities have the potential to increase erosion, sediment load and debris material into runoff flows. However, the Project would implement mitigation for erosion control and stormwater management (Mitigation Measure 5.3-1, Erosion control and Stormwater Management Measures), during construction and operation, and as a result, would be expected to reduce potential erosion, sediment loads and debris deposition to less- than-significant levels. Based on the results of the hydrologic analyses performed by Psomas (2009), with Project design measures applied, changes in runoff flows and volumes between pre- and post-development conditions would be insignificant, such that the proposed Project would not be expected to significantly contribute to incremental cumulative effects relative to flood hazards. Potential cumulative effects related to flood hazards would be less than significant.

3.3 FIRE HAZARDS

Potential Effect

The Project construction and operation activities would increase sources of fuel and fire (i.e., welding, electrical equipment, and energized conductors), such that the Project's incremental increase to fire hazards may result in potential cumulatively considerable effects.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

There are several other proposed projects within 5 miles of the Project site that have the potential to result in cumulative impacts related to fire hazards. Through the implementation of Mitigation Measure 5.4-1 (Fire Protection and Prevention Plan) as well as compliance with LACFD requirements, Project-specific impacts affecting risks of fire would be less than significant. It is assumed that other potential projects would be required to implement similar fire hazard reduction measures. Therefore, no significant cumulative effects related to fire hazards would be expected to occur.

3.4 WATER QUALITY

Potential Effect

The Project development involves activities having potential to release storm water pollutants, including erosion and sedimentation due to grading, vehicle and equipment fluids, household chemicals, trash, herbicides, etc., which in combination with related projects would degrade water quality, resulting in a significant cumulative impact.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

Water pollutants that could be released from development associated with the proposed Project and other potential cumulative projects could include runoff laden with sediment, vehicle and equipment fluids, household chemicals, trash, landscaping by-products, and other typical urban stormwater pollutants.

Developments in the proposed Project area, such as the Fairmont Butte Motorsports Park, would likely increase impermeable surfaces and, as a result, increase the volume of stormwater runoff that may be directed to applicable storm drain systems and/or off-site drainages. However, the Project is designed to balance pre- and post-construction runoff volumes and any increases due to the Project would be insignificant. Additionally, through implementation of required BMPs through the LRWQCB and LACDPW, as required in Mitigation Measure 5.3-1, Erosion Control and Stormwater Management Measures) and Project design measures, the proposed Project would not be expected to significantly contribute to deleterious effects on surface water quality. Since the proposed Project would not cumulatively contribute to significantly increased amounts of either stormwater runoff or pollution, the potential for cumulative effects on surface water quality is expected to be less than significant.

3.5 AIR QUALITY

Potential Effect:

Construction of the proposed Project involves earth-disturbance and equipment and vehicle use on the Project site and transmission line, which in combination with related projects would degrade air quality, resulting in a significant cumulative impact.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The construction schedule for the proposed Project has the potential to overlap with several other potential projects in the Project vicinity, including the Fairmont Butte Motorsports Park project and the SCE Tehachapi Renewable Transmission Project (TRTP). With implementation of Mitigation Measures 5.6-1 through 5.6-10, the total estimated maximum Project-specific criteria pollutant emissions over the 38-month construction phase of PM_{10} (27.94 tons) and NO_X (74.3 tons) equate to approximately 0.04 percent and 0.23 percent, respectively, of the total estimated emissions for 2008 within the AVAQMD (AVAQMD 2009). Depending on the technology selected, construction emissions for the remaining criteria pollutants ($PM_{2.5}$, CO, ROG, and SO_X) vary, but are similarly well under AVAQMD emission thresholds. Additionally, as earth-disturbance activities would generate dust, which is presumed to contain Valley Fever fungi (*C. immitis*) in the Project region, implementation of Project specific dust mitigation and worker safety measures, as identified in Mitigation Measures 5.6-1, 5.6-2, 5.6-3, 5.6-5, and 5.6-11 would reduce the Project's incremental increase in Valley Fever exposure to a less than significant cumulative contribution. As a result, construction

emissions from the proposed Project would not result in a cumulatively considerable increase in emissions within the AVAQMD.

During operation, the Project would result in less than significant PM_{10}, $NO_{X,}$ as well as all other criteria pollutant and greenhouse gas emissions. The proposed Project would emit minimal combustion emissions relative to the anticipated generated electrical output when compared to traditional electrical generation sources. Potential cumulative impacts of the proposed Project when considered together with other renewable energy projects proposed in the Project region (e.g., Pacific Wind Energy Project) would be considered to be beneficial and result in a combined substantial reduction in combustion-related emissions compared to traditional fossil fuel generation. The net reduction of emissions from other renewable based power projects cannot be accurately estimated due to the large number of projects in the early development and permitting stages. However, the total rated capacity of the other potential renewable energy projects and associated potential air quality benefits are much larger than the AV Solar Ranch One Project alone.

In summary, cumulative impacts for air quality for the proposed Project, when considered with other potential projects, are expected to be less than significant for emissions of PM_{10} and NO_X (and all other criteria pollutants) during the construction phase. Potential cumulative air quality impacts during the operational phase would be expected to be beneficial.

3.6 BIOLOGICAL RESOURCES

Potential Effect:

The Project construction and operation would result in loss of habitat, and two special-status species, the Blainville's Horned Lizard and the California burrowing owl, which have been identified on-site. Several special-status bird species (not including the burrowing owl) use on-site habitat to fulfill a portion of their ecological requirements. A portion of these species were judged to use the site minimally, and the remaining use the site either as nesting habitat or for foraging or wintering during nesting or special-status season. Implementation of the Project in conjunction with the related cumulative projects would result in further loss of habitat and impacts to special-status biological species, and has the potential to result in cumulative impacts to biological resources in the Antelope Valley.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The proposed Project would have potentially significant cumulative impacts on biological resources related to the conversion of substantial natural habitat areas to a developed condition. Implementation of the proposed off-site mitigation measures, Project impacts would be reduced to less than significant levels. Development trends in the Antelope Valley, and the corresponding habitat loss that occurs as a result, have not been steady over time (Galloway et al. 1998). Rather, rates of development have risen and fallen in response to economic drivers, including real estate prices and the overall vitality of the region. Rates of proposed development in the Antelope Valley have generally slowed since the late 1980s, but some development projects are nevertheless proposed, as identified in the Final EIR. However, because many of these projects are currently in the early planning stages and have not yet been approved, substantial details regarding the impacts of such projects on the environment are not yet known. Although the exact acreage to be impacted by these projects is not known, it is anticipated that all of the proposed and reasonably foreseeable future projects identified within the Project vicinity would involve some level of development within natural habitats. However, the floor of the Antelope Valley is fairly homogeneous with regard to the types of vegetation present, and the habitats disturbed by proposed and reasonably foreseeable future projects are generally abundant throughout the valley. Thus, although the proposed Project would represent an incremental reduction in the available natural habitat within the Antelope Valley, the cumulative impact of all proposed and reasonably foreseeable future projects on general habitat in the Valley would be less than significant.

The proposed Project would have significant impacts on one sensitive reptile and several special-status bird species, absent mitigation. Impacts associated with injury or mortality of individual birds would be substantially lessened by the mitigation measures (Mitigation Measures 5.7-1 through 5.7-13) recommended in the Final EIR, and would be unlikely to compound or worsen effects of other projects in the region. With implementation of the proposed off-site mitigation measures, impacts on special-status species associated with loss of habitat would be less than significant at the project level. As stated previously, the floor of the Antelope Valley is fairly homogeneous with regard to the types of vegetation present, and the habitats disturbed by proposed and reasonably foreseeable future projects are generally abundant throughout the valley. The common and special-status species occupying sites proposed for development are also expected to occupy similar habitats elsewhere in the Antelope Valley, and suitable foraging habitats, such as rabbitbrush and California annual grasslands, would remain abundant in the region despite the current and future development proposals. Thus, although the proposed Project would represent an incremental reduction (1,937 acres permanently removed or modified) in suitable foraging habitats for special-status species within the Antelope Valley, the cumulative impact of all proposed and reasonably foreseeable future projects on such habitats would be less than significant.

The proposed Project would not significantly impede the movement of medium-sized mammals in the vicinity, with mitigation and inclusion of the major wildlife movement corridor and wildlife-permeable fencing around key portions of the site perimeter.

3.7 CULTURAL RESOURCES

Potential Effect:

Implementation of the Project in conjunction with the related cumulative projects would result in further disturbance and developed areas, has the potential to result in a cumulative loss of cultural and historic resources in the Antelope Valley.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

There are multiple other proposed projects within 5 miles of the proposed AV Solar Ranch One Project that have the potential result in direct or indirect cumulative impacts on cultural resources. However, with implementation of the proposed Mitigation Measures 5.8-1 through 5.8-7 presented in the Final EIR for cultural resources, no Project-specific significant impacts to cultural resources would be expected to occur. Additionally, since the proposed Project impacts would be mitigated to less than significant levels, the proposed Project would not significantly contribute to possible cumulative effects associated with other projects in the Project region. Assuming that other projects that may be approved and implemented would also mitigate all their potentially significant project-specific impacts to cultural resources, as required by law, no significant cumulative impacts would be expected to occur.

3.8 AGRICULTURAL RESOURCES

Potential Effect:

Cumulative Project impacts to agricultural resources could occur in the event that the Project, in conjunction with related projects results in the cumulatively significant loss of Important Farmlands or Williamson Act contracted lands.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project is located in a region with significant agricultural uses; however, the Antelope Valley has been historically and is currently also limited by water costs and climatic conditions. The proposed Project would result in the permanent conversion of 0.016 acre of Prime Farmland. This amount is considered negligible. The proposed Project would also result in the conversion of 2,100 acres of former (more than 5 years ago) agricultural land to renewable energy production, thereby precluding possible agricultural production for the planned life of the Project (30 years). The proposed Project would be expected to contribute to the overall trend of conversion of agricultural lands to other uses in the Antelope Valley when considered together with other potential cumulative projects in the area. Since the Project site has not been used for agricultural production for over 5 years, and because the Project would result in a negligible conversion of Farmland, the Project's incremental contribution to cumulative agricultural impacts is considered less than significant.

3.9 VISUAL QUALITIES

Potential Effect:

Cumulative Project impacts could occur in the event that the Project, when viewed cumulatively with related projects in the vicinity, is considered to result in significant effects to visual quality.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

Multiple projects are identified in the Project region, which have the potential to result in cumulative impacts to aesthetics when considered together with the proposed Project. Several applications for additional renewable energy projects have recently been submitted that will potentially take advantage of the energy transmission infrastructure that is planned in the area. The energy development proposed around the planned SCE Whirlwind Substation and the associated SCE Tehachapi Renewable Transmission Project is likely to combine with the proposed Project to introduce a large amount of scale dominant industrial features to the rural area in southern Kern County. This is likely to permanently change the current, almost exclusively rural character of the general Project area through incremental increases in renewable industrial development. In conjunction with the proposed Fairmont Butte Motorsports Park, which also has scale dominant features, the existing character of the viewshed in the Antelope Valley in

northern Los Angeles County would be altered by harder surfaces, unnatural lines and urban colors. This raises the potential for adverse effects to visual quality.

The Project would not change the rural character of the Project area, and it is anticipated that the majority of the potential energy-related projects would occur north of the proposed AV Solar Ranch One Project in Kern County and would be further removed from the AVCPR and the Desert Woodland State Park. Direct visual impacts associated with implementation of the proposed Project have been determined to be less than significant in the Final EIR relative to the significance criteria utilized in the analysis. The proposed Project's incremental effects on visual quality would not be expected to be cumulatively considerable or significant for any of the significance criteria used in the visual quality assessment.

3.10 TRAFFIC AND ACCESS

Potential Effect:

Cumulative Project construction and operation impacts to traffic and access could occur if the Project, in conjunction with related projects, resulted in cumulatively considerable incremental effects to traffic and access.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

For the AV Solar Ranch One Project traffic analysis, it was conservatively assumed that to account for ambient traffic growth and cumulative project traffic, an ambient traffic growth of four percent per year was used to develop future baseline cumulative conditions from existing intersection traffic count data. This traffic growth assumption was based on the growth forecast for the North County Area from the Los Angeles County CMP. The traffic study for the AV Solar Ranch One Project built these assumptions into the Project-specific analyses, which indicate that the Project would result in less than significant impacts during construction in future project area conditions, with implementation of Mitigation Measures 5.11-1 (Provide Adequate Worksite Traffic Control) and 5.11-3 (Limit 50 Percent of Truck Deliveries to Off-Peak Hours). Following Project construction, the very low trip generation associated with the Project's operations workforce of 16 and occasional service/delivery trips would not result in significant cumulative traffic impacts in the Project study area.

Impacts to road wear and tear and maintenance requirements for 170th Street West from the Project construction equipment traffic for the approximately 38-month construction schedule when considered together with other existing and proposed traffic from other

pending projects that may utilize 170th Street West (e.g., north of SR-138) could result in cumulative impacts on the roadway pavement. Mitigation Measure 5.11-2 (Document Pre- and Post-Project Construction Pavement Condition of 170th Street West and Pay Fair Share) as well as separate County road repair mitigation requirements for other projects, as applicable, would reduce the potential incremental impacts of the Proposed project damage to the roadway to less than significant from a cumulative perspective.

3.11 FIRE PROTECTION SERVICES

Potential Effect:

Cumulative Project impacts to fire services could occur if the Project, in conjunction with related projects, resulted in a cumulatively considerable incremental increase in fire protection services.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project design, fire protection, and traffic considerations would be expected to result in less than significant impacts to fire service staffing and response times. The Project would also provide taxes and fees to the County that are designed to address cumulative fire service needs associated with new and existing developments, and as a result, the Project would be anticipated to result in less than significant incremental contributions to cumulative fire protection impacts.

3.12 SHERIFF SERVICES

Potential Effect:

Cumulative Project impacts to sheriff services could occur in the event that development of the Project resulted in a significant incremental increase for sheriff protection services in conjunction with the related projects.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project would implement security control, and would not involve uses that would result in significant demands to sheriff staffing or response times. As a result, the Project would be expected to result in less than significant incremental contributions to cumulative law enforcement impacts.

3.13 UTILITY SERVICES

Potential Effect:

Cumulative Project impacts to utility services may occur if the Project in combination with the related projects would result in a significantly cumulative increased demand for water, landfill capacity, electrical services, and natural gas.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The Project's water usage would be a significant reduction from the amount of groundwater reasonably estimated to be allocated to the Project site and would not likely exceed the Project's correlative share of the native safe yield. The Project's water demand comprises only 0.18 percent of the Antelope Valley Groundwater Basin's safe yield during construction, and 0.01 percent during operation. In the Antelope Valley Groundwater Basin, the unit water requirements for both agricultural and municipal land uses are within an overall range of about three to seven acre feet per acre per year (AF/A/YR). On a unitized basis, the Project's water demand would equate to about 0.07 AF/A/YR during construction and less than 0.01 AF/A/YR during operations (0.006 AF/A/YR). The water requirements on the Project site are exceptionally small. The proposed Project together with other existing and proposed groundwater users such as the Fairmont Butte Motorsports Park (proposed groundwater use of 49 AFY) could contribute to a cumulative impact on the groundwater resource. However, the Project's proposed minimal water extraction would constitute an insignificant contribution to any cumulative impacts to the Basin. Any long-term Project-related impacts on the Basin would be expected to be less than significant since the proposed withdrawals are minimal and would not exceed the allocations to be set as part of the Basin Adjudication in order to protect the Basin resource. The impacts of the proposed Project's minimal groundwater use of 150 AFY and 12 AFY during the construction and operations phases (i.e., about 0.18 and 0.01 percent, respectively, of the estimated total sustainable yield of 82,300 AFY for the Basin) would not be cumulatively considerable and would be less than significant.

The Project is not planned to require utility services for gas or propane. The Project would protect underground utilities in accordance with Public Resources Code Section 4216, and would coordinate electrical needs with SCE. As a result, the Project would result in less than significant effects to utility services. The Project's recycling practices during construction would reduce the amount of solid waste entering landfills, and the Project's overall contribution to solid waste disposal would be expected to be less than significant. During construction, the Project would follow required measures to prevent construction interference to utility services, and would comply with recycling requirements to minimize solid waste disposal to solid waste facilities. During operation, the Project would provide electricity, and would generate minimal amounts of solid waste. As a result, construction and operation of the Project would result in less than significant impacts to governmental and public facilities, which include electricity, gas, and solid waste services. During construction, the Project would follow required measures to prevent construction interference to utility services, and would comply with recycling requirements to minimize solid waste disposal to solid waste facilities. During operation, the Project would provide electricity, and would generate minimal amounts of solid waste. As a result, the Project's incremental contribution to cumulative impacts related to utility services would be less than significant.

3.14 ENVIRONMENTAL SAFETY

Potential Effect:

Implementation of the Project would result in potential disturbance of hazardous materials during earthwork and construction activities and use of hazardous materials, which could cumulatively expose people and structures to hazardous environmental safety conditions.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

The context for the analysis of cumulative impacts from environmental safety is limited to the immediately surrounding area. Hazardous materials and contamination issues are largely site specific and generally would not combine with impacts from other projects to result in cumulative impacts.

Based on land uses in the surrounding area (primarily agricultural and open space) and the limited amount and type of hazardous materials to be used as part of the proposed Project, no significant incremental cumulative impacts associated with environmental safety would be expected to occur as a result of the Project and implementation of Mitigation Measures

5.15-1 through 5.15-4 identified in the Final EIR. Regulations implemented by the Department of Toxic Substances Control (DTSC), LACFD, KCFD, and the RWQCB would require similar measures being applied to other potential developments with environmental safety issues in the Project region. Therefore, the proposed Project would not be expected to result in significant cumulative impacts related to the transport, use, or disposal of hazardous materials. In summary, the construction and operation of the proposed off-site transmission line would not be expected to result in any significant cumulative impacts relative to environmental safety issues.

3.15 LAND USE COMPATIBILITY

Potential Effect:

Cumulative land use impacts could occur in the event that other related projects in the vicinity of the Project site would result in land use impacts in conjunction with the Project.

Finding:

Changes or alteration have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

There are several other projects under consideration in the general area of the proposed AV Solar Ranch One Project that have the potential to result in cumulative effects with the proposed Project. The proposed Project is one of several proposed renewable development projects that would impact existing and proposed land uses within the general Project area. In addition, the Fairmont Butte Motorsports Park project is proposed within approximately 0.5 mile of the proposed Project on the south side of SR-138. Similar potential impacts can result from these projects as from the proposed Project with respect to consistency with General Plan Land Use plan and policies, and impacts to compatibility with surrounding land uses. All cumulative projects that may be approved and implemented would also assess potential impacts related to land use and planning. The proposed Project was found to have less than significant impacts related to zoning on site, consistency with General Plan Land Use Plan intent and Significant Ecological Area conformance criteria, dividing an existing community, and impacts to adjacent counties. Therefore, the proposed Project would not be expected to significantly contribute to potential cumulative land use related effects associated with other projects in the Project region.

3.16 GLOBAL CLIMATE CHANGE

Potential Effect:

Cumulative Project impacts to global climate change could occur if development of the Project resulted in cumulatively considerable emissions of greenhouse gases.

Finding:

Changes or alterations have been required in, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

There are multiple other projects in the Antelope Valley region that, if approved and built, would result in additional GHG emissions. Many of the other potential projects in the Antelope Valley and southern Kern County are also renewable energy projects. These projects, if approved and built, would be expected to contribute to a displacement of GHG emissions from fossil fuel power plants. Assessment of Project-generated GHG emissions through the Project lifetime (construction and operation phase) indicate that the Project is reasonably expected to reduce carbon dioxide equivalence (CO_2e) emissions by over 196,000 metric ton (MT) CO_2e per year during operation compared to emissions from an equivalent electrical output using eGrid information (i.e., current electrical supplies to the grid in California). Potential cumulative impacts of the proposed Project with other renewable energy projects proposed in the Project region would be considered to be beneficial and result in a combined reduction in GHG emissions. As a result, the Project is anticipated to result in less than significant cumulative impacts to GHG emissions.

3.17 NOISE

Potential Effect:

Significant cumulative noise impacts could occur as a result of use of construction equipment, including pile drivers, in the event that pile foundations are selected.

Finding:

Changes or alternations have been required, or incorporated into, the Project, which mitigate or avoid the significant environmental effects on the environment.

Facts Supporting the Finding:

Since noise attenuates rapidly with distance, only proposed project that is relatively close to the proposed Project having the potential to result in cumulative noise effects is the

proposed Fairmont Butte Motorsports Park (FBMP) located to the east of the proposed Project site.

The proposed Project has the potential to result in adverse noise impacts on residences to the west and north of the Project site due to pile driving of fixed-tilt solar panel foundations (if selected) during the construction phase; however, implementation of Mitigation Measure 5.18-1, Pile Drive Orientation, for the pile driving would render this impact to be less than significant. Additionally, Mitigation Measure 5.18-2, Construction Equipment Use of Mufflers, would further reduce Project construction noise. A review of the Noise section in the Draft EIR for the FBMP (issued by Los Angeles County in July of 2009) indicates that construction of this proposed project would potentially overlap with the construction phase for the proposed AV Solar Ranch One Project. However, construction of the FBMP was determined to have less-than-significant noise impacts during the construction phase. Similarly, cumulative impacts for noise were also determined to be less than significant (no impact). The operational-phase impacts of the proposed AV Solar Ranch One Project are expected to be minimal and insignificant. The operational phase impacts of the FBMP were determined to be potentially significant on residences within 8,000 feet of the FBMP site, although mitigation measures are listed in the FBMP Draft EIR to reduce impacts. No potentially significant cumulative construction-phase noise impacts on the residences to the west and north of the proposed AV Solar Ranch One Project site are expected for the FBMP. Additionally, no potentially significant operational-phase cumulative noise impacts would occur due to the minimal noise generated by Project operations for the AV Solar Ranch One Project.

SECTION 4.0 FINDINGS REGARDING PROJECT ALTERNATIVES

These findings and statements of fact regarding project alternatives and certain mitigation measures identified in the Final EIR are set forth to comply with Section 21002 of the Public Resources Code and Sections 15091(a)(3) and 15126.6 of the CEQA Guidelines.

Alternatives to the proposed Project described in the Draft EIR were analyzed and considered. These alternatives constitute a reasonable range of alternatives necessary to permit a reasoned choice.

For the reasons set forth below, the Final EIR concludes that while the Alternative Facility Layout (Alternative 2) is considered to be the environmentally superior alternative by reducing facility development area and hence reducing the associated Project impacts to sensitive biological resources, the alternative would be incapable of meeting the Project goals and objectives. Therefore, Alternative 2, as analyzed in the Final EIR is rejected as infeasible for the specific economic, legal, social, technological, or other considerations set forth below. The Underground Transmission Line Alternative (Alternative 3) which proposes to locate the Project on-site and off-site transmission lines underground (Los Angeles County portion of Project only), would slightly increase biological impacts, but would reduce visual impacts and resultant changes in character, would be consistent with the Antelope Valley Areawide General Plan policy, and would not impact the overall Project objectives. As a result, the Underground Transmission Line Alternative is considered to be both a viable and environmental preferable alternative to the proposed Project.

4.1 ALTERNATIVES CONSIDERED BUT NOT EVALUATED

The EIR considered a number of potential alternatives that were rejected as infeasible, and therefore, did not analyze in detail in the EIR. The rejected potential alternatives included alternatives sites, alternative transmission line routes, alternative project size, alternative technologies, and alternative drainage improvements.

4.2 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

Description:

Under the No Project Alternative, the Project site would remain in its present condition with site conditions (i.e., former agricultural with associated farm residence and structures) as they currently exist.

Finding:

The No Project Alternative is rejected as infeasible because it fails to meet the Project goals and objectives, and would not contribute to the State's ability to meet its near- and long-term renewable energy generation goals and objectives.

Facts Supporting the Finding:

The potential environmental impacts and benefits of the proposed AV Solar Ranch One Project would not occur as a direct consequence of Project implementation under the No Project Alternative. Additionally, if the Project is not developed for solar energy generation, the property would likely be developed for other uses. Possible alternative uses could include residential uses, since a portion of the property had been previously subdivided that allowed development of 160 residential units as part of a potential master planned development. Additionally, based on the current County zoning ordinance, allowable uses by right under the property's existing zoning designation (Heavy Agriculture [A-2]) consist of: agriculture (crops, dairies, animal shelter and kennels, hogs, manure spreading and sales); residential uses (including but not limited to adult residential facilities, child care homes, and single family homes); fairgrounds; certain packing and processing plants; and resource extraction (i.e., oil wells, including the installation and use of such equipment, structures and facilities necessary or convenient for all customary drilling and producing operations, including initial separation of oil, gas, and water, and storage, handling, recycling, and transporting of such oil, gas, and water from the premises). Such other uses would have associated impacts to environmental resources.

In summary, the No Project Alternative does not constitute a reasonable alternative to the proposed Project because it is incapable of meeting the Project goals and objectives, or contributing to the State's ability to meet its near- and long-term renewable energy generation goals and objectives. If the proposed Project is not approved and implemented it is possible that the Project site would be developed for other purposes (e.g., residential) with commensurate environmental impacts.

4.3 ALTERNATIVE 2: ALTERNATIVE FACILITY LAYOUT

Description:

Alternative 2, the Alternative Facility Layout, increases the Project development setback (i.e., distance from the Project property line to the proposed facility fence) to 250 feet from adjacent Significant Ecological Area (SEA) #60 (Joshua Tree Woodland Habitat) areas along the northern and northeastern portions of the Project site, and increases the Project setback from Drainage C along the southern Project site development boundary (fenceline) from a minimum of approximately 150 feet to 1,500 feet. The primary

purpose of Alternative 2 would be to lessen potential Project impacts to biological resources.

Finding:

Alternative 2 is rejected because it is not considered to be fully capable of meeting the Project goals and objectives. Alternative 2 would reduce the facility's generating capacity by approximately 25 MW, which would render the Project incapable of meeting its full contractual electricity delivery obligation under the Project power purchase agreement (PPA), and would incur financial penalties under contract terms of the PPA.

Facts Supporting the Findings:

The proposed Project design provides minimum setback distances of 70 to 100 feet from the Project property boundary to the proposed fenceline to adjacent SEA areas, and provides a setback from Drainage C of a minimum of approximately 150 feet. Alternative 2 would provide a larger buffer distance between the proposed development and the adjacent SEA areas. The 250-foot buffer areas would result in on-site avoidance of approximately 75 acres of primarily rabbitbrush scrub habitat (non-sensitive habitat) in the buffer area, and would reduce the site generating capacity by approximately 4 MW.

Alternative 2 also incorporates a 1,500-foot setback from Drainage C to avoid areas containing both wildflower field (sensitive habitat) and rubber rabbitbrush scrub (non-sensitive habitat). Alternative 2 would increase the wildflower avoidance area, provide a larger buffer from Drainage C, and allow wildlife movement in the setback area. This setback would preclude approximately 180 acres from development, of which approximately 120 acres comprises wildflower field and 60 acres of rabbitbrush scrub. Avoidance of this acreage would further reduce the Project generation output by approximately 21 MW.

In general, other Project facilities such as the O&M building, substation, transmission line, etc. would remain unchanged. Incorporation of the increased buffer areas from the adjacent SEA areas and Drainage C would decrease the developable area on the Project site by approximately 10 percent and impacts would be less than significant for biological resources under Alternative 2. Additionally, Alternative 2 would reduce the facility's generating capacity by approximately 25 MW. As a result, implementation of Alternative 2 would render the Project incapable of meeting its contractual electricity delivery obligation under the Project power purchase agreement, and consequently would incur financial penalties under the contract terms with PG&E. For this reason, Alternative 2 is not considered to be fully capable of meeting the above-described Project objective to fulfill its contractual electrical delivery obligation. Compared with the proposed Project, Alternative 2 would reduce potential Project impacts to sensitive biological resources, and would involve less ground disturbance. However, mitigation measures presented in

Final EIR would reduce the impacts to biological resources associated with development of the proposed Project to less than significant levels.

4.4 ALTERNATIVE 3: UNDERGROUND TRANSMISSION LINES

Description:

Alternative 3, Underground Transmission Lines, would underground substantial portions of the Project-related 34.5-kV and 230-kV transmission lines in Los Angeles County. The locations of underground transmission lines under this alternative (on-site and off-site) in Los Angeles County would be the same as the corresponding overhead line locations under the proposed Project. Solar field characteristics and other Project features under this alternative would remain unchanged compared to the proposed Project.

Finding:

Alternative 3 is selected because it is capable of meeting the Project's goals and objectives and would reduce visual impacts and resultant changes in character from the on-site and off-site transmission lines; minimize the proliferation of aboveground transmission lines; and ensure compliance with the County's transmission line undergrounding policy in the Antelope Valley area (Antelope Valley Areawide General Plan Policy 65).

Facts Supporting the Findings:

Under Alternative 3, the majority of the proposed on-site overhead 34.5-kV transmission lines (approximately 3 miles) would be buried underground rather than using the proposed Project's overhead pole-mounted system. The 34.5-kV transmission lines would remain aboveground at the 170th Street West crossing near the on-site substation and at crossings of state jurisdictional drainages. The aboveground construction is required at the 170th Street West crossing because the Los Angeles Department of Water and Power (LADWP) aqueduct pipeline, located along the west side of 170th Street West, cannot be crossed by an underground transmission line. Aboveground crossings would be used at jurisdictional drainages to avoid disturbance to these features.

The 230-kV transmission line would be installed underground from the Project substation to the Kern County line (approximate total length of 2.25 miles) with the exception two aboveground locations to cross 170th Street West (at the northern Project boundary and just prior to the Kern County boundary) while avoiding interference with the LADWP aqueduct. The transmission line would be aboveground in Kern County, based on Kern County's request.

Operationally, both overhead and underground collection systems function similarly, where electricity is transported through conductors. Beyond these operational similarities

however, there are physical differences that include: 1) the degree of disturbance to the surrounding area during construction; 2) the degree of permanent disturbance; and 3) the maintenance and repair activities (i.e., undergrounded transmission lines have limited access in the event that maintenance is required, and would potentially result in reduced reliability and longer power outages and duration of repairs). Implementation of Alternative 3 would require a greater temporary disturbance and excavation during construction (estimated additional 7,871 cubic yards of excavations), would limit future land use options above the underground facilities due to buried conduit protection needs, and would limit access for maintenance, if needed.

Potential impacts to biological and agricultural resources due to implementation of Alternative 3, as a result of the underground 230-kV portion, would be greater than for the proposed Project overhead system. It is important to note that once underground transmission line facilities are constructed, most land uses above the underground line would be precluded, since the underground transmission line duct bank is typically surrounded on all sides by a specially formulated thermal concrete to within 12 inches of the ground surface, which creates a physical barrier to future land use (for instance, no agricultural use could occur above the undergrounded line). However, the underground transmission duct bank is generally compatible with road shoulder/edge of road ROW uses. Key differences between Alternative 3 and the proposed Project include:

- The undergrounded 230-kV portion of Alternative 3 is estimated to temporarily disturb approximately 1.5 acres of Joshua tree woodland habitat, where it is expected that construction of the proposed overhead poles would disturb only about 0.6 acre.
- It is estimated that the undergrounded 230-kV portion could potentially permanently impact approximately 0.6 acre of Joshua tree woodland habitat, whereas it is expected that the proposed overhead poles can be located to avoid Joshua trees and less than 0.01 acre of Joshua tree woodland habitat would be permanently impacted.
- Alternative 3 could preclude or limit future land uses over the approximately 1.5-mile-long off-site buried conduit bank (and vault areas) for the 230-kV transmission line.
- The entire underground system would require greater amounts of excavation (approximately 7,871 cubic yards of additional excavation) to install due to the required trenching of the conduit banks and in the case of the 230-kV line, access vaults (including required importation of thermal concrete backfill).
- Alternative 3 would reduce visual impacts relative to the proposed Project (note: overhead transmission line impact is less than significant).
- Alternative 3 would result in increased truck traffic and air emissions during construction compared to the proposed Project, but impacts would be less than significant.

In summary, Alternative 3 would slightly increase biological impacts to Joshua tree woodland, and would increase short-term construction impacts, but these would remain less than significant with mitigation. This alternative would reduce visual impacts and resultant changes in character from the on-site and off-site transmission lines, and would not impact the overall Project goals and objectives. With the exception of three required overhead crossings of 170th Street West (two 230-kV crossings and the 34.5-kV crossing), Alternative 3 would also eliminate corona noise and electric fields associated with overhead transmission lines in the vicinity of overhead transmission lines in Los Angeles County. Finally, undergrounding the majority of the proposed overhead 34.5-kV and 230-kV transmission lines would be consistent with Los Angeles County's transmission line undergrounding policy as stated in the Antelope Valley General Plan. Alternative 3 is therefore considered to be a viable and environmentally preferable alternative that is capable of meeting the Project's goals and objectives.

SECTION 5.0 FINDINGS REGARDING THE MITIGATION MONITORING AND REPORTING PROGRAM

Pursuant to Section 21081.6 of the Public Resources Code, the Board, in adopting these Findings, also adopts the Mitigation Monitoring and Reporting Program ("Program") for the AV Solar Ranch One Project. This Program is designed to ensure that, during Project implementation, the County and other responsible parties will comply with the mitigation measures adopted in these Findings.

The Board hereby finds that the Mitigation, Monitoring, and Report Program, which is incorporated herein by reference and attached as Exhibit A to these Findings, meets the requirements of Public Resources Code Section 21081.6 by providing for the implementation and monitoring of Project conditions intended to mitigate potential environmental effects of the Project.

SECTION 6.0 CEQA GUIDELINES § 15091 AND 15092 FINDINGS

Based on the foregoing findings and the information contained in the administrative record, the Board has made one or more of the following findings with respect to each of the significant effects of the project:

A. Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant environmental effects on the environment.

B. Those changes or alterations are within the responsibility and jurisdiction of another public agency and such changes have been adopted by such other agency, or can and should be adopted by such other agency.

C. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the Final EIR.

Based on the foregoing findings and the information contained in the administrative record, and as conditioned by the foregoing:

A. All significant effects on the environment due to the Project have been eliminated or substantially lessened where feasible.

SECTION 7.0 CEQA GUIDELINES § 15084(D)(3)

The County has relied on Section 15084(d)(3) of the State CEQA guidelines, which allows acceptance of working drafts prepared by the applicant, a consultant retained by the applicant, or any other person. The County has reviewed and edited as necessary the

submitted drafts to reflect the County's own independent judgment, including reliance on County technical personnel from other departments.

SECTION 8.0 PUBLIC RESOURCES CODE § 21082.1(C) FINDINGS

Pursuant to Public Resources Code §21082.1(c), the Board hereby finds that the lead agency has independently reviewed and analyzed the Final EIR, and that the Final EIR reflects the independent judgment of the lead agency.

SECTION 9.0 NATURE OF FINDINGS

Any finding made by this Board shall be deemed made, regardless of where it appears in this document. All of the language included in this document constitutes findings by this Board, whether or not any particular sentence or clause includes a statement to that effect. This Board intends that these findings be considered as an integrated whole and, whether or not any part of these findings fail to cross reference or incorporate by reference any other part of these findings, that any finding required or committed to be made by this Board with respect to any particular subject matter of the Final EIR, shall be deemed to be made if it appears in any portion of these findings.

SECTION 10.0 RELIANCE ON RECORD

Each and all of the findings and determinations contained herein are based on the competent and substantial evidence, both oral and written, contained in the entire administrative record relating to the AV Solar Ranch One Project. The findings and determinations constitute the independent findings and determinations of this Board in all respects and are fully and completely supported by substantial evidence in the record as a whole.

SECTION 11.0 RELATIONSHIP OF FINDINGS TO EIR

These findings are based on the most current information available. Accordingly, to the extent there are any apparent conflicts or inconsistencies between the Draft EIR and the Final EIR, on the one hand, and these findings, on the other, these findings shall control, and the Draft EIR, Final EIR, or both, as the case may be, are hereby amended as set forth in these findings.

SECTION 12.0 CUSTODIAN OF RECORDS

The custodian of the documents or other material which constitute the record of proceedings upon which the County's decision is based is the Los Angeles County Department of Regional Planning located at 320 West Temple Street, Los Angeles, California 90012.

EXHIBIT A

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM[1,2]
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
GEOTECHNICAL HAZARDS				
MM 5.2-1: Implementation of Geotechnical Engineering Report Recommendations. The design and construction of the Project shall comply with applicable building codes and standards (e.g., CBC) as well as the recommendations in the geotechnical engineering report (Terracon 2009) to the satisfaction of the Los Angeles County Department of Public Works.	Regular plan check and Site inspection	Prior to issuance of grading permit(s) and During construction	Applicant/Construction Manager	LACDPW
FLOOD HAZARDS				
MM 5.3-1: Erosion Control and Stormwater Management Measures. In order to ensure that Project-related erosion and debris deposition as well as stormwater-related impacts would be minimized, the design measures specified in the Drainage Concept Report (Psomas 2009) and the following measures shall be implemented subject to review and approval by the Los Angeles County Department of Public Works (LACDPW): • Avoidance of all drainage areas: Construction and operational phase activities shall avoid all on-site drainages and FEMA Zone A floodplain areas. Solar field development shall be set back from the two major drainages (Drainages A and C) by a minimum of approximately 100 feet from the tops of banks for both Drainages A and C. Additionally, all Project development shall be set back a minimum of 100 feet from the FEMA Zone A floodplain for Drainage C. • Applicant shall comply with NPDES requirements of the Lahontan Regional Water Quality Control Board (LRWQCB) and the LACDPW.	Submittal and approval of final drainage plan and File Notice of Intent and Maintain log demonstrating compliance with NPDES requirements and Site inspection	Prior to issuance of grading permit and During construction and operation	Applicant/Construction Manager	LACDPW LRWQCB

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
FIRE HAZARDS				
MM-5.4-1: Fire Protection and Prevention Plan. The proposed Project shall develop and submit a Fire Protection and Prevention Plan to the LACFD for review and approval prior to issuance of a Grading Permit. The Plan shall address construction and operation activities for the Project, and establish standards and practices that will minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. The Fire Protection and Prevention Plan shall address spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, and fire suppression equipment and training requirements. In addition, all vehicle parking areas, storage areas, stationary engine sites and welding areas shall be cleared of all vegetation, and flammable materials. All areas used for dispensing or storage of gasoline, diesel fuel or other oil products shall be cleared of vegetation and other flammable materials. These areas shall be posted with signs identifying they are "No Smoking" areas. An interim fire protection system shall be in place during construction until the permanent system is completed. The Plan shall also address vegetation clearance and maintenance requirements applicable to the transmission pole structures during operation. Special attention shall be paid to operations involving open flames, such as welding, and use of flammable materials. Personnel involved in such operations shall have appropriate training. A fire watch utilizing appropriately classed extinguishers or other equipment shall be maintained during hot work operations. Site personnel shall not be expected to fight fires past the incident stage. The local responding fire officials shall be given information on the site hazards and the	Submittal and approval of Fire Protection and Prevention Plan and Provide training to personnel dealing in operations involving open flares and flammable materials and Site inspection and Maintain log demonstrating compliance	Prior to issuance of grading permit and During construction and operation	Applicant/Construction Manager	LACFD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
location of these hazards, and the information shall be included in the emergency response planning.				
Materials brought on-site shall conform to contract requirements, insofar as flame resistance or fireproof characteristics are concerned. Specific materials in this category include fuels, paints, solvents, plastic materials, lumber, paper, boxes, and crating materials. Specific attention shall be given to storage of compressed gas, fuels, solvents, and paint. Electrical wiring and equipment located in inside storage rooms used for Class I liquids shall be stored in accordance with applicable regulations. Outside storage areas shall be graded to divert possible spills away from buildings and shall be kept clear of vegetation and other combustible materials.				
On-site fire prevention during construction shall consist of portable and fixed firefighting equipment. Portable firefighting equipment shall consist of fire extinguishers and small hose lines in conformance with Cal-OSHA and the National Fire Protection Association (NFPA) for the potential types of fire from construction activities. Periodic fire prevention inspections shall be conducted by the Manager's safety representative.				
Fire extinguishers shall be inspected routinely and replaced immediately if defective or in need of recharge. All firefighting equipment shall be conspicuously located and marked with unobstructed access. A water supply of sufficient volume, duration, or pressure to operate the required firefighting equipment shall be provided on-site. Authorized storage areas and containers for flammable materials shall be used with adequate fire control services.				
The Operations Fire Protection and Prevention Program shall address the following:				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• Names and/or job titles responsible for maintaining equipment and accumulation of flammable or combustible material control • Procedures in the event of fire • Fire alarm and protection equipment • System and equipment maintenance • Monthly inspections • Annual inspections • Firefighting demonstrations • Housekeeping practices • Training				
WATER QUALITY				
Mitigation Measure 5.5-1: On-site Wastewater Treatment System Feasibility Report. Prior to construction/installation of the on-site septic/leach field system, a complete OWTS feasibility report shall be submitted to the LACDPH for review and approval. The feasibility report shall be prepared in conformance with the requirements outlined in the current version of LACDPH guidelines, "On-site Wastewater Treatment System Guidelines."	Submittal and approval of OWTS feasibility report	Prior to construction/installation of on-site septic/leach field system	Applicant/Construction Manager	LACDPH
AIR QUALITY				
MM 5.6-1: Ensure AVAQMD Construction Emission Thresholds would be Met. Prior to issuance of the grading permit, the Applicant shall select an engineering, procurement, and construction (EPC) contractor to build the Project. The Applicant/EPC contractor shall be required to demonstrate that the final construction plans will not result in exceedances of applicable AVAQMD air emission significance	Submittal and approval of Construction Emissions Report	Prior to issuance of grading permit	Applicant/Construction Manager	AVAQMD LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
thresholds during construction of the Project to the satisfaction of AVAQMD and LACDRP. Prior to issuance of a grading permit, the Applicant shall prepare a report describing the Applicant's final engineering design-based plan for constructing the Project, including: 1) scheduling of construction activities; 2) equipment usage and details; 3) construction workforce loading; 4) truck deliveries schedule; and 5) ground disturbing/dust generating activities, etc. The report shall include emission calculations to demonstrate that the final construction plan will not result in exceedances of all applicable AVAQMD criteria pollutant emissions thresholds to the satisfaction of AVAQMD. The emission calculations shall include consideration of the emission reductions provided by implementation of Mitigation Measures 5.6-2 through 5.6-10, below.				
MM 5.6-2: Develop and Implement Fugitive Dust Emission Control Plan. The Applicant shall develop a Fugitive Dust Emission Control Plan (FDECP) for construction work. The FDECP shall be submitted to AVAQMD for review and approval prior to issuance of a grading permit. Measures to be incorporated into the FDECP shall include, but are not limited to the following: • The proposed PM measures (#24 to #44) in AVAQMD's List and Implementation Schedule for District Measures to Reduce PM Pursuant to Health & Safety Code §39614(d) shall be incorporated into the fugitive dust control plan, as applicable. • Non-toxic soil binders shall be applied per manufacturer recommendations to active unpaved roadways, unpaved staging	Submittal and approval of Fugitive Dust Emission Control Plan and Maintain log demonstrating compliance and Site inspection	Prior to issuance of grading permit and During construction	Applicant/Construction Manager	LACDRP AVAQMD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
areas, and unpaved parking area(s) throughout construction to reduce fugitive dust emissions. • Travel on unpaved roads shall be reduced to the extent possible, by limiting the travel of heavy equipment in and out of the unpaved areas. • Water the disturbed areas of the active construction sites at least three times per day, (when soil moisture conditions result in dust generation) and more often if visible fugitive dust leaving the site is noted. • Enclose, cover, water twice daily, and/or apply non-toxic soil binders according to manufacturer's specifications to exposed piles of soils with a five percent or greater silt content. • Maintain unpaved road vehicle travel to the lowest practical speeds, and no greater than 15 miles per hour (mph), to reduce fugitive dust emissions. • All vehicle tires shall be inspected, be free of dirt, and washed as necessary prior to entering paved roadways from the Project site. • Install wheel washers or wash the wheels of trucks and other heavy equipment where vehicles exit the site. • Cover all trucks hauling soil and other loose material, or require at least 2 feet of freeboard. • Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures) or otherwise create stabilized surfaces on all unpaved areas through application of dust palliatives at each of the construction sites within 21 days after active construction operations have ceased. • Prepare contingency for high wind periods (greater than 25 mph)				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
to shutdown or mitigate activity as necessary to control fugitive dust. • Travel routes to each construction site area shall be developed to minimize unpaved road travel. Travel management shall include staging of deliveries to minimize idling or congestion, use of dust palliatives or soil tackifiers on road surfaces, and minimizing travel distance.				
MM 5.6-3: Dust Plume Response Requirement. An air quality construction mitigation manager (AQCMM) or delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported: 1) off the Project site; 2) 200 feet beyond the centerline of the construction of linear facilities; or 3) within 100 feet upwind of any regularly occupied structures not owned by the Project owner indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall promptly implement additional dust plume reduction measures in the event that such visible dust plumes are observed. Additional measures to be implemented, as necessary, shall include increased watering, application of dust palliatives, and/or scaled back construction activities up to and including temporary work cessation.	Dust plume monitoring and Maintain log demonstrating compliance	During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-4: Off-road Diesel-fueled Equipment Standards. All portable construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 hp or more, and all off-road construction diesel engines not registered under CARB's In-use Off-road Diesel Vehicle Regulation, which have a rating of 25 hp or more, shall meet, the	Conduct fleet average calculation annually and Submittal and approval of	Prior to issuance of grading permit and During construction	Applicant/Construction Manager	LACDRP AVAQMD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
projected 2011 fleet average of NO_X and PM emissions as that predicted by the OFFROAD2007 model in Appendix D. The EPC shall use the CARB Portable Diesel Engine Airborne Toxic Control Measure (ATCM) Fleet Calculators and the Off-road Diesel Fleet Average Calculators (for large/medium fleets) in accordance with the respective regulation under Title 13 of the California Code of Regulations (CCR) to conduct this comparison. No Tier 0 diesel equipment shall be used at the site after the initial calculation/registration without recalculation using the CARB fleet calculators. The fleet average calculation of the on site equipment shall be conducted annually to ensure compliance. The EPC Manager shall ensure labeling of all portable and off road diesel equipment in accordance with Title 13 of the CCR.	Construction Emissions Report and Maintain log demonstrating compliance			
MM 5.6-5: Limit Vehicle Traffic and Equipment Use. Vehicle trips and equipment use shall be limited by efficiently scheduling staff and daily construction activities to minimize the use of unnecessary/duplicate equipment.	Submittal and approval of Construction Emissions Report and Maintain log demonstrating compliance	Prior to issuance of grading permit and During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-6: Heavy Duty Diesel Water Haul Vehicle Equipment Standards. For the pile foundation case (which results in higher air emissions than the ballast foundation case and requires additional mitigation), the EPC shall use 2006 model or newer engines in order to meet the EMFAC predicted emissions levels in grams of pollutant per mile travelled (g/mile) of on-road heavy duty diesel trucks used for water hauling at the site. The EPC contractor shall ensure labeling of	Submittal and approval of Construction Emissions Report and Maintain log	Prior to issuance of grading permit and During construction	Applicant/Construction Manager	LACDRP AVAQMD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
such trucks to indicate model year.	demonstrating compliance			
MM 5.6-7: On-road Vehicles Standards. All on-road construction vehicles shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.	Maintain log demonstrating compliance	During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-8: Properly Maintain Mechanical Equipment. The construction contractor shall ensure that all mechanical equipment associated with Project construction is properly tuned and maintained in accordance with the manufacturer's specifications.	Maintain log demonstrating compliance	During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-9: Restrict Engine Idling to 5 Minutes. Diesel engine idle time shall be restricted to no more than 5 minutes as required by the CARB engine idling regulation. Exceptions in the regulation include vehicles that need to idle as part of their operation, such as concrete mixer trucks.	Maintain log demonstrating compliance	During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-10: Off-road Gasoline-fueled Equipment Standards. Any off-road stationary and portable gasoline powered equipment brought on site for construction activities shall have USEPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in affect two years prior to the commencement of Project construction. In the event that USEPA Phase 1/Phase 2 compliant engines are determined not to be available, the Applicant shall provide documentation to the AVAQMD with an explanation.	Submittal and approval of Construction Emissions Report and Maintain log demonstrating compliance	Prior to issuance of grading permit and During construction	Applicant/Construction Manager	LACDRP AVAQMD
MM 5.6-11: Off-road Equipment Operator Worker Protection. Appropriate training for respiratory protection shall be provided to construction workers. Dust masks (NIOSH approved) shall be	Administer training to construction workers and provide NIOSH	Prior to and during construction	Applicant/Construction Manager	LACDRP AVAQMD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
provided with proper training to construction workers to mitigate the protection against dust exposure and possibly Valley Fever during high wind events and/or dust-generating activities.	approved dust masks and Maintain log demonstrating compliance			
BIOLOGICAL RESOURCES				
MM 5.7-1: Habitat Enhancement and Vegetation Management Plan. Prior to issuance of a grading permit, the Project Applicant shall develop a Habitat Enhancement and Vegetation Management Plan (HEVMP) to compensate for impacts to existing vegetation communities by preserving and enhancing the remaining vegetation within the Project site. The HEVMP shall also provide measures to ensure minimal impacts to habitat along the off-site transmission line. In areas suitable for on-site mitigation, the HEVMP shall identify appropriate mitigation objectives, standards, and monitoring/reporting requirements to enhance habitat such that the resulting habitat values would be greater than those lost as a result of project implementation. These habitat values would include nesting and foraging habitat for songbirds, foraging habitat for raptors and owls, and high diversity and abundance of native forbs/wildflowers. In areas rendered unsuitable for mitigation due to proposed development, the HEVMP shall identify appropriate restrictions, such as limiting noxious weeds, but shall not impose mitigation standards. The HEVMP shall be prepared by a qualified restoration biologist experienced with desert habitat restoration, and shall specify appropriate revegetation and management practices for the following portions of the Project site to the satisfaction of LACDRP:	Submittal and approval of Habitat Enhancement and Vegetation Management Plan and Maintain log demonstrating compliance and Site inspection	Prior to issuance of grading permit and During construction and operation	Applicant/ Qualified Biologist/Construction Manager	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• Mitigation and Avoidance Areas (refer to Figure 5.7-11 of this DEIR): 1. Drainage A, a 100-foot setback, and the associated wildlife travel route (47.1 acres) 2. Drainage B and a 20-foot buffer (approximately 6 acres) 3. The southernmost portion of the Project site along Drainage C, where no development is proposed (45 acres) 4. The Joshua tree recruitment area (8.6 acres, including buffer) • Areas of Modified/Impacted Habitat (Unsuitable for Mitigation): 1. All portions of the site within the fire breaks (217 acres) 2. All interior portions of the site within the proposed solar arrays, excluding locations of proposed infiltration basins and fire breaks (1,336 acres) 3. All portions of the site to be occupied by proposed infiltration basins (253 acres) In general, for each of the locations enumerated above, the HEVMP shall specify, at a minimum, the following (specific details vary depending on location, and are described in the paragraphs that follow): • The location and extent of any on-site enhancement/revegetation areas, to be depicted graphically on an aerial photograph or schematic of appropriate scale • The quantity and species of plants to be seeded (if necessary), including the locations where each type of vegetation would be created				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• A schedule and action plan to maintain and monitor the enhancement/revegetation areas • A list of success criteria (e.g., growth, plant cover, plant/wildlife diversity) by which to measure success of the enhancement/revegetation effort • Contingency and/or adaptive management measures in the event that enhancement/revegetation efforts are not successful In addition, the standards and practices set forth in the HEVMP for each area shall conform to the requirements stated below: • Within the setback zones surrounding Drainage A, Drainage B, and Drainage C the HEVMP shall provide for 101 acres of on-site mitigation, as well as 6 acres of additional avoidance area (due to its small and isolated nature, the 6-acre area surrounding Drainage B is not included as suitable mitigation land, but would nonetheless be avoided), and shall ensure the following: 1. Drainages A, B, and C, including adjacent buffer areas shown on Figures 5.7-7 and 5.7-11, as well as the local wildlife travel route associated with Drainage A, shall be set aside, preserved, and enhanced, and no Project-related disturbance shall be permitted in these areas. 2. Any anthropogenic discontinuities in the existing vegetation (unofficial roads, dump sites, etc.) within the ephemeral drainage setbacks shall be remedied, and such areas shall be seeded with native plant species characteristic of the surrounding vegetation. 3. Vegetative cover in herbaceous communities (grasslands, wildflower fields) shall exceed 95 percent; of this, invasive				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
forbs (as identified by the Cal-IPC) shall not exceed five percent cover. Bare ground shall not exceed five percent excluding bare ground located within the channel bottom of an ephemeral drainage or bare ground where there is clear evidence that the bare ground was the result of mammal activity (burrows, wildlife trails, etc.). 4. Vegetative cover in shrub-dominated communities (desert saltbush scrub, rabbitbrush scrub) shall exceed 90 percent, and shrub cover shall exceed 30 percent. Invasive forbs and shrubs combined shall not exceed five percent cover, and bare ground shall not exceed five percent excluding bare ground located within the channel bottom of an ephemeral drainage or bare ground where there is clear evidence that the bare ground was caused by mammal activity (burrows, wildlife trails, etc.). 5. In Drainages A and C and the adjacent setback/buffer areas as shown on Figure 5.7-7, vegetation in the area shall remain suitable for foraging by burrowing owls and other grassland bird species. Habitat enhancement/revegetation shall be implemented if necessary to ensure continued suitability. 6. Joshua trees and junipers shall be planted, to improve habitat suitability for sensitive bird species and increase the likelihood that these areas will be occupied by such special-status species as loggerhead shrikes and long-eared owls. • Within the Joshua tree recruitment area, the HEVMP shall provide 8.6 acres of mitigation land, and shall ensure the following:				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
1. The Joshua tree recruitment area and a 50-foot buffer from the Joshua tree seedlings shall be set aside and preserved, and no Project-related disturbance shall be permitted in this area. 2. Any anthropogenic discontinuities in the existing vegetation (other than the County roadbed of West Avenue C, which passes through this area) shall be remedied, and such areas shall be seeded with native plant species characteristic of the surrounding vegetation. 3. Measures shall be implemented to encourage the continued recruitment of Joshua trees into this area. Such measures may include standards for herbaceous and shrub cover, removal of non-native plants and wildlife, and others. 4. To provide nesting and perching habitat and increase structural diversity within restoration areas, native shrub species associated with Joshua tree woodland (including Mojave yucca, sage, box-thorn, and buckwheat, as noted in the County General Plan) shall be included in the planting palette.				
• Within the proposed fire breaks, no suitable on-site mitigation opportunities exist. However, the HEVMP shall ensure the following: 1. To prevent the potential spread of fire onto the Project site, the proposed fire breaks shall be maintained clear of vegetative cover through mechanical clearing and selective herbicide use. 2. If herbicides are used as approved by LACDRP to control				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
vegetation, they shall be applied by a qualified individual and in a manner consistent with the product labeling. Under no circumstances shall herbicides be allowed to pass into any ephemeral drainage. 3. Under no circumstances shall forb species identified by the California Invasive Plant Council (Cal-IPC) as invasive weeds be allowed to thrive in the fire breaks, or as required by LACFD. Cover of these species, collectively, shall be maintained at or below five percent. • Within all interior portions of the site within and adjacent to the proposed solar arrays, excluding locations of proposed infiltration basins, no suitable on-site mitigation opportunities would exist. However, the HEVMP shall ensure the following: 1. To control fugitive dust, vegetative cover of grasses and forbs within the proposed solar arrays shall be maximized. 2. Vegetation seeded in these areas shall be comprised of low-growing communities such as native grasslands and wildflower fields, to minimize the effects of vegetation management practices on the revegetated areas. Shrub species shall not be used, as these species would be unable to survive continued vegetation trimming. 3. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in the revegetation efforts. 4. To promote the growth of local, native plant species, the top 2-6 inches of topsoil removed during Project-related grading and/or excavation shall be stockpiled and spread across disturbance zones after completion of construction in the				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
area. 5. To ensure that a seed supply is maintained to perpetuate on-site vegetation (e.g., annual grasses and wildflowers), vegetation shall be allowed to grow to a maximum height of 18 inches between February 1 and approximately mid-April prior to mowing to a height of 6 inches (or less) by May 1 (through the following January) as required by the LACFD. 6. Herbicides shall be approved for use by the County, and herbicide application shall be performed by trained personnel who can identify the species to be treated. If herbicide is applied, it shall be applied during dry and low wind conditions in order to prevent herbicide drift into non-target areas. • Within the proposed infiltration basins, no suitable on-site mitigation opportunities exist. However, the HEVMP shall ensure the following: 1. If herbicides are used as approved by LACDRP to control vegetation (i.e., non-native vegetation), they shall be applied by a qualified individual and in a manner consistent with the product labeling. Under no circumstances shall herbicides be allowed to pass into any ephemeral drainage. 2. Under no circumstances shall forb species identified by Cal-IPC as invasive weeds be allowed to thrive in the infiltration basins, or as required by LACFD. Cover of these species, collectively, shall be maintained at or below five percent. • Within all portions of the transmission line route to be impacted during installation of transmission line poles and temporary				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
stringing sites, the HEVMP shall ensure the following: 1. Under no circumstances shall ground disturbance occur within 25 feet of an existing Joshua tree. In applicable areas, Joshua tree avoidance zones shall be delineated with high-visibility construction fencing. 2. All areas of temporary ground disturbance shall be revegetated with appropriate plant communities native to the Project region, such as native grasslands, wildflower fields, desert scrub, rabbitbrush scrub, desert saltbush scrub, and Joshua tree woodland. 3. Where impacts would occur in existing agricultural lands outside the Applicant's ownership, it is presumed that agricultural practices would resume after completion of construction. Therefore, revegetation shall not be required in these areas. 4. If earthwork is proposed in areas where native vegetation exists, the top 2-6 inches of topsoil removed during Project-related ground clearing shall be stockpiled and spread across disturbance zones after completion of construction in the area. 5. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in the revegetation efforts. 6. The HEVMP shall include provisions to minimize the effects of transmission line maintenance on biological resources, including a requirement that no Joshua trees shall be removed during such maintenance. In addition to the location-specific requirements set forth above, the				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
HEVMP shall also ensure that the following standards are met or exceeded within the Project site as a whole: 1. The HEVMP shall identify appropriate locations for creation of rabbitbrush scrub, California annual grassland, and wildflower fields, the three most abundant existing natural communities on-site, within avoided portions of the Project site. In total, 101 acres of on-site mitigation shall be provided. 2. Performance monitoring of the on-site enhancement and revegetation areas shall be monitored approximately quarterly, in January, April, June, and November, and a report detailing the monitoring results shall be submitted to the LACDRP annually. Monitoring and reporting shall be required for a period of five years and until such time as performance standards are achieved. The HEVMP shall contain contingency measures identifying corrective actions required in the event that the performance standards are not met. 3. All percent cover standards shall be evaluated during the spring biomass peak. 4. Anti-coagulant rodenticides shall not be used within the Project site or along the proposed transmission line route. The HEVMP shall be submitted to the LACDRP for review and approval prior to issuance of a grading permit.				
MM 5.7-2: Off-site Mitigation for Loss of Habitat. Within one year of Project approval or prior to the installation of 50 MW of photovoltaic solar panels, the Applicant shall provide a minimum of 450 acres of off-site mitigation land to be restored, enhanced, and maintained according to the requirements of this mitigation measure, and shall be	Acquisition of a minimum of 450 acres of off-site mitigation land	Mitigation lands to be acquired within one year of Project approval or prior to the installation of 50 MW of	Applicant/Qualified Biologist	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
preserved as open space in perpetuity. Within 45 days of acquiring the mitigation land(s), the Applicant shall record a permanent deed restriction on the mitigation land(s) to be preserved as open space. The deed restriction language shall be submitted to LACDRP for review and approval prior to recordation. Alternatively, should a conservation easement on the mitigation land(s) be offered, the permanent conservation easement(s) shall be recorded to the satisfaction of LACDRP. The off-site mitigation land shall not exceed 10 separate fragments and shall be acquired adjacent to existing public lands, or within or adjacent to SEAs within the Antelope Valley or surrounding foothills. At least 225 acres of the mitigation land shall be acquired in the vicinity of the Antelope Valley California Poppy Reserve, including lands in or adjacent to SEA #57, or lands connecting the Poppy Reserve to the Angeles National Forest. An additional 75 acres shall be acquired within this same area, or in or adjacent to SEA #60, or adjacent to the Arthur B. Ripley Woodland State Park. The Applicant shall establish a fund sufficient for the restoration, enhancement, and maintenance of the mitigation land(s) until such time when the mitigation land(s) become self-sustained and meet the requirements of this mitigation measure. The fund shall be established within 90 days of mitigation land(s) acquisition in an amount acceptable to the LACDRP. The selected off-site mitigation lands shall contain vegetation communities similar to those found within the Project site, including rabbitbrush scrub, annual grassland, and wildflower fields. Although the proposed Project would not significantly impact Joshua tree woodland habitat, lands containing this vegetation community shall	and Record permanent deed restriction(s), or conservation easement(s) on the mitigation land(s) to the satisfaction of LACDRP and Submittal and approval of Restoration, Enhancement, and Maintenance Plan and Establish sufficient fund for the restoration, enhancement, and maintenance of the mitigation land(s)	photovoltaic solar panels and Deed restriction(s) or conservation easement(s) to be recorded within 45 days of acquiring mitigation lands and Restoration, Enhancement, and Maintenance Plan shall be submitted within 60 days of recordation of permanent deed restriction(s) or conservation easement(s) and Establish fund within 90 days of mitigation land(s) acquisition		

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
also be considered desirable due to the County's concern over the continuing loss and degradation of Joshua tree woodlands. The selected lands shall comply with the following mitigation requirements: 1. The subject property shall be located within the greater Project vicinity, generally defined to include the Antelope Valley and surrounding foothills. 2. The subject property(s) shall contain a minimum of 450 acres of land, which shall be either comprised of vegetation communities characteristic of the Antelope Valley (rabbitbrush scrub, annual grassland, wildflower fields, and/or Joshua tree woodlands) or be reasonably capable of being enhanced and converted to such habitat through the use of maintenance and management practices such that the resulting habitat values would be greater than those lost as a result of Project implementation. 3. The subject property(s) shall either contain a minimum of 224.5 acres of wildflower field, or shall be reasonably capable of being enhanced and converted to this vegetation through maintenance and management practices. 4. The subject property(s) shall provide at least 39 acres of contiguous suitable foraging habitat for the burrowing owl, including presence of suitable burrows. If suitable natural burrows are not present within the subject property, artificial burrows shall be constructed in accordance with California Burrowing Owl Consortium (1993) guidelines. 5. The subject property(s) shall contain a minimum of 450 acres of suitable foraging habitat for grassland/scrubland bird species occurring in the Antelope Valley.				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
6. The subject property(s) shall contain habitat suitable for the Blainville's horned lizard. Within the mitigation site, suitable locations shall be identified for relocation of horned lizards captured and removed from the Project site pursuant to Mitigation Measure 5.7-7. Generally, it is presumed that the wildflower field areas required by item (3) above will be suitable for this species. 7. Under no circumstances shall species identified by the Cal-IPC as invasive weeds be used in revegetation efforts. 8. The subject property(s) shall be maintained such that invasive forbs (as identified by the Cal-IPC) shall not exceed 5 percent of the vegetative cover. Within 60 days of recordation of the permanent deed restriction(s) or conservation easement(s), a Restoration, Enhancement, and Maintenance Plan for the off-site mitigation land(s) shall be submitted to LACDRP for review and approval. The plan shall include the restoration, enhancement, and maintenance requirements for each mitigation area, based on the characteristics of the mitigation land and the mitigation requirements described above, and shall also include contingency measures in the event that habitat creation/restoration/ enhancement efforts are not successful. The Restoration, Enhancement, and Maintenance Plan shall also describe the performance standards for determining when the mitigation requirements for the lands have been met. In addition to meeting the requirements detailed above, the following desirable factors shall also be considered when selecting off-site mitigation property(s): 1. Lands located between blocks of protected habitat are desirable locations for off-site mitigation, as protecting these areas can				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
ensure that essential habitat connections remain in perpetuity. 2. Lands containing Joshua tree woodland habitat are desirable locations for off-site mitigation, due to the continuing loss and degradation of this resource. 3. Lands containing junipers are also desirable locations for off-site mitigation, due to the nesting habitat they may provide for some special-status bird species. 4. Lands containing important landscape features, sensitive habitats, or listed species are desirable locations for off-site mitigation, due to the sensitivity of these resources and the general understanding that such elements are indicative of high biological value.				
MM 5.7-3: Biological Restrictions on Dust Suppression. Where construction activities are proposed within 100 feet of mapped Joshua tree woodland vegetation or the Joshua tree recruitment area, a screening fence (i.e., a 6-foot-high chain link fence with green fabric up to a height of 5 feet) shall be installed to protect locations where these sensitive resources may be present to the satisfaction of LACDRP. In addition, dust abatement within 100 feet of these areas shall be achieved by water or by chemical dust suppression if authorized by the County and CDFG.	Install screening fence and Maintain log demonstrating compliance and Site inspection	During construction	Applicant/Construction Manager	LACDRP
MM 5.7-4: Nesting Bird Surveys Prior to Mowing. Should mowing for vegetation management purposes occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the Project region, or as determined by a qualified biologist), the Applicant shall have weekly	Conduct weekly nesting bird surveys during nesting/breeding season	Prior to mowing activities during nesting/breeding season	Applicant/Qualified Biologist	LACDRP CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
nesting bird surveys conducted. These surveys shall be conducted by a qualified biologist, shall commence within 30 days prior to any mowing, and shall be conducted to determine whether any active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the area to be disturbed. The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of mowing activities. If mowing is delayed, then additional surveys shall be conducted such that no more than seven days would have elapsed between the survey and mowing. The Applicant or Manager shall provide the biologist with plans detailing the extent of proposed mowing prior to the survey effort.	and Submittal and approval of survey reports			
If active nests are found, mowing within 300 feet (500 feet for raptors) of the nest shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of mowing to avoid an active nest shall be established in the field with highly visible construction fencing, and solar plant personnel shall be instructed on the sensitivity of nest areas. The results of the surveys, including graphics showing the locations of any nests detected, and any avoidance measures implemented, shall be submitted to the LACDRP and CDFG within 14 days of completion of the surveys to document compliance with applicable state and federal laws pertaining to the protection of native birds. Nesting bird surveys shall be conducted in each of the first five years after Project development. At the end of this period, the results				

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
of the first five years of surveys shall be submitted to the LACDRP and CDFG. After submittal of the first five-year survey results, the County of Los Angeles, under consultation with CDFG, shall determine whether or not the nesting bird surveys shall continue.				
MM 5.7-5: Biological Monitor. Prior to grading, a qualified biologist shall be retained by the Applicant as the biological monitor subject to the approval of the County of Los Angeles. The biological monitor shall ensure that impacts to biological resources are avoided or minimized to the fullest extent possible. During earth moving activities, the biological monitor shall be present to relocate any vertebrate species that may come into harm's way to undisturbed areas of suitable habitat using appropriate methods that would not injure the wildlife. The biological monitor shall have the authority to stop specific grading or construction activities if violations of mitigation measures or any local, state, or federal laws are suspected.	Biological monitoring and Maintain log demonstrating compliance	During construction	Applicant/Qualified Biologist	LACDRP
MM 5.7-6: Worker Environmental Education Program. A Worker Environmental Education Program shall be developed for construction crews by a qualified biologist(s) provided by the Applicant. Training materials and briefings shall include but not be limited to: discussion of the value and identification of special-status species, including the burrowing owl and desert tortoise, review of sensitive species likely to occur within the construction area, the Migratory Bird Treaty Act and the consequences of non-compliance with this act, a contact person in the event of the discovery of dead or injured wildlife, and a review of mitigation requirements. The training sessions shall be conducted by a qualified biologist or other individual approved by the biologist. Maps showing the location of special-status wildlife or other construction limitations shall be provided to the environmental monitors and	Administer Worker Environmental Education Program and Maintain log demonstrating compliance	Prior to and ongoing during construction activities (as needed for new construction workers)	Applicant/Qualified Biologist/Construction Manager	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
construction crews prior to construction activities. As part of the environmental training, Managers and heavy equipment operators shall be provided with photographs or illustrations of expected special-status wildlife species so they will able to identify them, and avoid harming them during construction.				
MM 5.7-7: Blainville's Horned Lizard Capture and Relocation. Prior to the initiation of ground clearing activities, capture and relocation efforts shall be conducted for the Blainville's horned lizard to the satisfaction of LACDRP. Trapping shall be conducted by a County-approved biologist possessing proper scientific collection and handling permits, and shall include the following steps: • Prior to initiating the capture and relocation effort, a suitable receptor location shall be identified to receive relocated horned lizards. The receptor locations shall contain suitable habitat for this species, including open, shrub-dominated vegetation. The 45-acre avoidance area near the southern edge of the Project site likely constitutes a suitable on-site receptor location. • The capture and relocation effort shall take place during the active season (April through October) preceding commencement of ground disturbance activities, when lizards are most likely to be active. Surveys shall be conducted when air temperatures immediately above the ground surface is between 70°F (21°C) and 102°F (39°C). All areas proposed for temporary or permanent ground disturbance shall be surveyed for the Blainville's horned lizard. • Surveys shall be conducted by placing coverboards on the ground 4 to 6 weeks in advance of the survey effort, and	Perform capture and relocation efforts and Maintain log demonstrating compliance	Prior to ground clearing activities	Applicant/County-Approved Biologist	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
checking the area under the coverboards for horned lizards on a weekly basis. Coverboards can consist of untreated lumber, sheet metal, corrugated steel, or other flat material. Captured lizards shall be placed immediately into containers containing sand or moist paper towels and released in designated receptor locations no more than three hours after capture. • If the biologist believes there is high potential for previously relocated lizards to return to the impact sites following relocation, silt fence shall be installed to prevent relocated individuals from reoccupying areas proposed for disturbance.				
MM 5.7-8: Pre-construction Nesting Bird Surveys. Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region, or as determined by a qualified biologist), the Applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of special-status bird species, or of any bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code, are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. The surveys shall occur on a weekly basis, with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. The Applicant or Manager shall provide the biologist with plans detailing the extent of proposed ground disturbance prior to the survey effort.	Conduct weekly nesting bird surveys during nesting/ breeding season and Submittal and approval of pre-construction nesting bird survey reports	Nesting bird surveys prior to vegetation clearing or ground disturbance during nesting/breeding season	Applicant/Qualified Biologist	LACDRP CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with highly visible construction fencing, and construction personnel shall be instructed on the sensitivity of nest areas. Occupied nests adjacent to the construction site shall also be avoided to ensure nesting success. A qualified biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur. The results of the surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, shall be submitted to the LACDRP and CDFG within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.				
MM 5.7-9: Pre-Construction Wintering Burrowing Owl Surveys. If construction or site preparation activities are scheduled during the non-nesting season of the burrowing owl (typically September through January), the Applicant shall retain a qualified biologist to conduct wintering burrowing owl surveys within the area to be disturbed. The survey shall be conducted no more than 21 days prior to commencement of construction activities in the area. During the construction period, the results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, shall be submitted to the LACDRP and	Submittal and approval of pre-construction wintering burrowing owl survey report(s) during non-nesting season and Submittal and	Prior to and during construction	Applicant/Qualified Biologist	LACDRP CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
CDFG on a monthly basis. If active burrows are detected, the required avoidance measures shall conform to the following: • If burrowing owls are observed using burrows during the non-breeding season, occupied burrows shall be left undisturbed, and no construction activity shall take place within 300 feet of the burrow where feasible (see below). • If disturbance of owls and owl burrows is unavoidable, owls shall be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with CDFG protocols (CDFG 1995). Specifically, exclusion devices, utilizing one-way doors, shall be installed in the entrance of all active burrows. The devices shall be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows shall then be excavated by hand and refilled to prevent reoccupation. Exclusion shall continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist. • If construction activities must be initiated in any area of the site during the burrowing owl breeding season (typically February through August), pre-construction surveys for burrowing owls shall be conducted. Any active burrowing owl burrows found at this season shall not be disturbed. Construction activities shall not be conducted within 300 feet of an active burrow at this season.	approval of pre-construction survey report(s) during burrowing owl breeding season and Implement avoidance measures, as applicable			
MM 5.7-10: Burrowing Owl Management Plan. Prior to issuance of a grading permit, a habitat management plan for the burrowing owl shall be developed for portions of the site supporting suitable habitat for	Submittal and approval of Burrowing Owl	Prior to issuance of grading permit	Applicant/Qualified Biologist	LACDRP CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
burrowing owl and away from Project facilities and the solar panel arrays. Specifically, this plan shall be developed for implementation in the undeveloped areas surrounding Drainage A and in the southernmost portion of the Project site, near West Avenue E. At a minimum, the plan shall include the following elements: • If occupied burrows are to be removed, the plan shall contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations within Drainage A and Drainage C that would compensate for the burrows removed. • A methodology for the eviction and passive relocation of any owls from the impact area to proactively established artificial burrows. • Provisions for vegetation management, specifying the maximum allowable vegetative cover adjacent to established artificial burrows and the methodology to be used in maintaining the appropriate cover. • Measures prohibiting the use of rodenticides. • The plan shall specify a minimum of 6.5 acres of suitable foraging habitat to be preserved or created through revegetation and restoration practices for every active burrowing owl burrow within the Project site. These mitigation areas shall not be located in areas shaded by the proposed solar arrays, and shall not be subject to vegetation mowing or other fuel management practices. Foraging areas shall be located adjacent to suitable natural or artificial burrow locations. The Burrowing Owl Habitat Management Plan may be prepared and presented either as a stand-alone document or as a component of the HEVMP required by Mitigation Measure 5.7 1, and shall be submitted	Habitat Management Plan			

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
to the LACDRP and CDFG for review and approval prior to issuance of a grading permit for the Project.				
MM 5.7-11 Facility Lighting. Project facility lighting shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields. The lighting plan shall be submitted to LACDPW for review and approval.	Submittal and approval of Facility Lighting Plan and Site inspection	Prior to issuance of building permit	Applicant	LACDPW LACDRP
MM 5.7-12: Desert Kit Fox. To avoid injury or mortality of the desert kit fox, preconstruction surveys shall be conducted for this species concurrent with the pre-construction nesting bird surveys required by Mitigation Measure 5.7-4. A qualified biologist shall perform pre-construction surveys for kit fox dens in the Project site and along the proposed transmission line route, and shall survey all areas where Project facilities, transmission line poles, grading, mowing, equipment access, or other disturbances are proposed. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active. Inactive dens in areas that would be impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by desert kit fox. Active and potentially active dens in areas that would be impacted by construction activities shall be monitored by the biological monitor for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand to prevent reuse. If tracks are observed, the den shall be progressively	Submittal and approval of Pre-Construction Survey Report(s)	Within 30 days of completion of surveys, and prior to construction (ongoing as construction progresses to new areas)	Applicant/Qualified Biologist	LACDRP CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the kit fox from continuing to use the den. After verification that the den is unoccupied, it shall then be excavated and backfilled by hand to prevent reuse, while ensuring that no kit fox are trapped in the den. The Applicant shall submit a report to the LACDRP and CDFG within 30 days of completion of the kit fox surveys describing the survey methods, results, and details of any dens backfilled or foxes observed.				
MM 5.7-13: Pre-construction Desert Tortoise Surveys. Within 30 days prior to construction-related initial ground clearing and/or grading, the Applicant shall retain a qualified biologist to conduct surveys for signs of occupancy by the desert tortoise. Surveys shall be conducted on foot, and intended to detect any live tortoises or their carcasses, burrows, palates, tracks, or scat. Should any desert tortoise sign indicating the presence of desert tortoise be detected, the Applicant shall not proceed with ground clearing and/or grading activities in the area of the find and shall contact the USFWS and CDFG to develop an avoidance strategy. The results of the pre-construction surveys, including graphics showing the locations of any tortoise sign detected, and documentation of any avoidance measures taken, shall be submitted to the USFWS, CDFG, and LACDRP within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable federal and state laws pertaining to the protection of desert tortoise.	Conduct desert tortoise surveys and Submittal and approval of pre-construction desert tortoise survey results	Within 30 days prior to construction-related ground clearing and/or grading and Within 14 days of completion of pre-construction surveys or construction monitoring	Applicant/Qualified Biologist	LACDRP USFWS CDFG

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
CULTURAL AND PALEONTOLOGICAL RESOURCES				
MM 5.8-1: Avoid Archaeological Sites. Archaeological sites within the proposed Project area shall be avoided and protected from future disturbance or evaluated for significance and mitigated, as appropriate, to the satisfaction of the Los Angeles County Department of Regional Planning (LACDRP).	Maintain log to demonstrate compliance	During construction and operation	Applicant/Construction Manager/Cultural Resources Monitor	LACDRP
MM 5.8-2: Phase II Testing/Phase III Data Recovery. Prior to construction, Phase II testing and evaluation shall be conducted at all unavoidable prehistoric archaeological sites in the proposed Project area to determine their significance under Section 15064.5 of CEQA. Sites determined eligible for the California Register of Historic Resources (CRHR) shall either be avoided and protected from future disturbance, or a Phase III data recovery plan shall be prepared and implemented prior to construction to the satisfaction of LACDRP. All archaeological collections, technical reports and related documentation shall be curated at a curation facility approved by the County of Los Angeles.	Submittal and approval of Phase II Report/Phase III Data Recovery Plan, and related documentation, as applicable	Prior to construction	Applicant/Qualified Archaeologist	LACDRP
MM 5.8-3: Archaeological Monitoring. Prior to construction, an archaeological monitoring plan shall be prepared and implemented to the satisfaction of LACDRP. A qualified archaeological monitor shall be present during all ground disturbing activities, including vegetation clearing, grubbing, grading, filling, drilling, and trenching. In the event that any prehistoric or historic cultural resources (chipped or ground stone lithics, animal bone, ashy midden soil, structural remains, historic glass or ceramics, etc.) are discovered during the course of construction, all work in the vicinity shall halt, and the archaeologist shall record the resources on the appropriate California Department of	Submittal and approval of Archaeological Monitoring Plan and Submittal and approval of additional Phase II and Phase III technical reports,	Prior to issuance of grading permit and During construction and Following completion of ground-disturbance construction activities	Applicant/Qualified Archaeologist/Cultural Resources Monitor	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Parks and Recreation (DPR) 523 Series Forms, evaluate the significance of the find, and if significant, determine and implement the appropriate mitigation, including but not limited to Phase III data recovery and associated documentation to the satisfaction of LACDRP. Such activities may result in the preparation of additional Phase II and Phase III technical reports. After ground-disturbing construction activities have been completed, an archaeological construction monitoring report shall be completed and submitted to the LACDRP.	as applicable and Archaeological monitoring and Submittal of Archaeological Construction Monitoring Report			
MM 5.8-4: Native American Monitor. A Native American monitor (Tataviam/Fernadeno Band of Mission Indians) shall be notified prior to construction and allowed the opportunity to be present during all ground disturbing activities, including vegetation clearing, grubbing, grading, filling, drilling, and trenching. In the event that any sacred site or resource is identified, a Native American monitor shall be retained to divert construction activities to another area of the Project site while a proper plan for avoidance or removal is determined to the satisfaction of the LACDRP.	Notify Native American monitor of construction activities and Maintain log to demonstrate compliance and Site inspection	Prior to and during construction	Applicant/Construction Manager/Cultural Resources Monitor	LACDRP
MM 5.8-5: Human Remains. In the event human remains are encountered, construction in the area of the finding shall cease, and the remains shall stay in situ pending definition of an appropriate plan. The Los Angeles County Coroner (Coroner) shall be contacted to determine the origin of the remains. In the event the remains are Native American in origin, the NAHC shall be contacted to determine	Maintain log to demonstrate compliance and	During construction	Applicant/Construction Manager/Cultural Resources Monitor	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
necessary procedures for protection and preservation of the remains, including reburial, as provided in the State of California Environmental Quality Act (CEQA) Guidelines, Section 15064.5(e), "CEQA and Archaeological Resources," CEQA Technical Advisory Series.	Site inspection			
MM 5.8-6: Paleontological Resources Protection. In the event paleontological discoveries are encountered by the cultural monitors, all excavation shall cease in the area of the find and a paleontologist shall be retained, who shall devise a plan for recovery in accordance with standards established by the Society of Vertebrate Paleontology. At least one of the on-site cultural monitors during construction shall have familiarity and expertise in paleontological resources and have the ability to recognize significant vertebrate paleontological resources. Any paleontological resources shall be documented and submitted to the Natural History Museum of Los Angeles County, or any other accredited institution (i.e., San Bernardino County Museum, UCLA Dept of Earth and Space Sciences) that will accept paleontological resources for curation.	Paleontological resources monitoring and Maintain log and documentation, as applicable, to demonstrate compliance	During construction	Applicant/Construction Manager/Cultural Resources Monitor	LACDRP
MM 5.8-7: Construction Worker Training. Prior to construction, the qualified archaeological monitor or qualified designee shall conduct a brief educational workshop such that all construction personnel understand monitoring requirements, roles and responsibilities of the monitors, and penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources. The construction worker training shall include an overview of potential cultural and paleontological resources that could be encountered during ground disturbing activities to facilitate worker recognition, avoidance, and subsequent immediate notification to a designated on-site cultural monitor for further evaluation and action, as appropriate.	Implement educational workshop for all construction workers and Maintain log to demonstrate compliance	Prior to and ongoing during construction activities (as needed for new construction workers)	Applicant/Construction Manager/Qualified Archaeological Monitor	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
AGRICULTURAL RESOURCES				
MM 5.9-1: Transmission Line Williamson Act Review (Kern County). Prior to the construction of the proposed transmission line route within any Williamson Act contracted lands in Kern County, the Applicant shall submit a written site description, along with a plot plan of the proposed transmission line route within the contracted land to the Kern County Planning Department for review and approval.	Submittal of documentation demonstrating approval from Kern County Planning Department	Prior to construction of transmission line	Applicant	LACDRP KCPD
VISUAL QUALITIES				
MM 5.10-1: Visual Screening During Construction. Prior to any construction activity within the vicinity of SR-138, temporary screening of construction and staging areas (e.g., via vegetation, or fencing with fabric or slats) shall be installed to minimize visual effects from construction as required by LACDRP.	Install temporary screening, as required and Maintain log to demonstrate compliance and Site inspection	Prior to construction activities within vicinity of SR-138	Applicant/Construction Manager	LACDRP
MM 5.10-2: Construction Housekeeping. During construction, the development site shall be maintained. The Project facility construction site and off-site transmission line route work areas shall be kept clean of debris, trash, or waste.	Maintain development site and Site inspection	During construction	Applicant/Construction Manager	LACDRP
MM 5.10-3: Building and Equipment Paint. All proposed on-site structures and appropriate equipment shall be neutral colors and non-	Submittal and approval of building and equipment paint	Prior to issuance of building permit	Applicant	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
reflective, as approved by the LACDRP.	palette plans and information			
MM 5.10-4: Screening Vegetation Landscaping Plan and Maintenance. Prior to issuance of a grading permit, the Applicant shall submit a landscaping plan for the 10-foot-wide strip of Project screening vegetation proposed along both sides of SR-138, to the LACDRP for review and approval. The Plan shall be certified by a registered landscape architect, and shall identify use of temporary irrigation, and the areas on both sides of SR-138 at the Project site to be planted with Joshua trees and/or other native yucca species, and native shrub species, in compliance with the County Drought-Tolerant Landscaping Ordinance. The landscaping shall be installed within 14 months of the commencement of construction activities. The vegetation shall be maintained via selective thinning and removal of invasive weeds and monitored thereafter to promote successful, long-term establishment of the native vegetation to the satisfaction of LACDRP. The landscaped area shall also be maintained free of trash and debris for the Project lifetime to the satisfaction of LACDRP.	Submittal and approval of Screening Vegetation Landscaping Plan and Maintain log to demonstrate compliance and Site inspection	Prior to issuance of grading permit and During construction and operation	Applicant/Registered Landscape Architect/ Construction Manager	LACDRP
MM 5.10-5: Maintenance of SR-138 Caltrans and County Easements. The areas on both sides of the existing Caltrans right-of-way for SR-138 offered for dedication in fee simple by the Applicant to Caltrans and the irrevocable 10-foot-wide slope easement on both sides of the 200-foot-wide Caltrans right-of-way offered to the County as described in Section 4.2 of this EIR shall be maintained free of trash and debris on an as-needed basis to the satisfaction of LACDRP. The dedicated area for Caltrans shall be maintained by Applicant until such time the deed for the applicable area is transferred to Caltrans, and the slope easement area for the County	Maintain log to demonstrate compliance and Site inspection	During construction and operation, prior to deed transfer for Caltrans easement and prior to improvements by County for slope easement area	Applicant/Construction Manager	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
shall be maintained by the Applicant until such time that the County installs improvements.				
TRAFFIC AND ACCESS				
MM 5.11-1: Provide Adequate Worksite Traffic Control. Prior to any construction activities and/or issuance of required encroachment permits from Caltrans and Los Angeles and Kern counties, the Applicant shall prepare worksite traffic control plans for review and approval from Caltrans, the LACDPW, and the Kern County Resource Management Agency, Roads Department. The plans shall include: 1) the location and usage of appropriate construction work warning signs that shall be placed in accordance with the California Manual on Uniform Traffic Control Devices (Caltrans 2010); 2) proper merging taper and/or shifting lane schematics; and 3) adequate work area and buffer zone designation as well as proper location and conduct of flagmen and the traffic management supervisor at the installation worksite area. The Project worksite traffic control plans shall be coordinated with driver and worker safety in mind. Where the observed speed limit on affected roadways is 55 MPH or more, the plans shall incorporate and implement the following minimum standard requirements per the Work Area Traffic Control Handbook (WATCH): • A Type C flashing arrow pane shall be used for each closed lane. • The minimum height for traffic cones shall be 28 inches. • A minimum of three advance warning signs shall be posted. • Consideration of advanced safety enhancement measures shall be taken into account for workers in the work zones. The above safety and traffic control measures identified in the traffic control plans shall also be implemented at pole installation sites within	Submittal and approval of Worksite Traffic Control Plans and Advance notification of road closures to LACFD and submittal of detour plans	Prior to issuance of grading permit or encroachment permit, where applicable and During construction	Applicant/Construction Manager	LACDRP LACDPW LACFD KCRD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
the public road ROW and/or roadway crossings at a minimum. Additionally, the County, including the LACFD Fire Stations 78, 112, and 140 shall be notified at least three days in advance of any street closures that may affect fire and/or paramedic responses in the area. Applicant shall provide alternate route (detour) plans to the County, including three sets to the LACFD, with a tentative schedule of planned closures, prior to the beginning of construction.				
MM 5.11-2: Document Pre-and Post-Project Construction Pavement Condition of 170th Street West and Pay Fair Share. Prior to issuance of a grading permit, Applicant shall document and submit all required information and/or material pertaining to the pavement conditions of 170th Street West including the formula for calculating the Project's fair share of any repair and/or reconstruction of 170th Street West to the satisfaction of the LACDPW. Applicant shall reimburse the County of Los Angeles for the cost of any repairs and/or reconstruction of 170th Street West attributable to the Project as agreed to by the LACDPW. The timing of any necessary repairs and/or reconstruction of 170th Street West and the required payment by Applicant shall be determined by LACDPW.	Submittal and approval of Pre-Construction Pavement Condition documentation and the Project's fair share formula and Submittal and approval of Post-Construction Pavement Condition documentation and Payment of fair share	Prior to issuance of grading permit and Following construction	Applicant/Construction Manager	LACDPW
MM 5.11-3: Limit 50 Percent of Truck Deliveries to Off-Peak Hours. During the construction phase of the Project, Applicant/EPC contractor shall require equipment and materials suppliers using trucks to make deliveries to the Project site such that at least 50	Maintain log to demonstrate compliance	During construction	Applicant/Construction Manager	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
percent of associated truck traffic occurs during off-peak hours.				
ENVIRONMENTAL SAFETY				
MM 5.15-1: Additional assessment, and possibly remediation, of potentially contaminated soils on the Project site. Prior to the issuance of a grading permit, the Applicant shall obtain a site closure letter from the Los Angeles County Fire Department, Health Hazardous Materials Division. The Applicant shall conduct additional site assessment or remediation activities as required by and to the satisfaction of the Voluntary Oversight Program of the CUPA (Los Angeles County Fire Department, Health Hazardous Materials Division). Additional assessment and/or remediation may include the following: 1) Preparation of applicable Phase II Environmental Site Assessment Work Plans that describe the proposed approach and methods to be used in characterizing shallow soils. The Work Plans shall include the proposed sampling locations, sample collection procedures, analytical methods, quality control measures, and a site-specific health and safety plan. The Phase II ESA(s) shall be submitted to the CUPA for regulatory review and approval. 2) Implementation of the Phase II ESA Work Plan(s) with CUPA oversight. As necessary, Site Remediation Action Plans shall be developed. Upon CUPA concurrence with the recommendations presented the Phase II ESA(s), remedial action plans shall be prepared for submittal to the CUPA. The remedial action plans shall include the following. 1) Remediation goals and cleanup criteria.	Perform necessary assessment and remediation, as applicable, and obtain Site Closure Letter from LACFD	Prior to issuance of grading permit	Applicant	LACDRP LACFD (CUPA)

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
2) Evaluation of corrective action alternatives that compares the effectiveness, feasibility, and cost benefit of each alternative. The remedial action plans shall take into account existing and proposed uses of the Project area. 3) Identification of the preferred alternative with consideration of protection of resources within the Project area. 4) A detailed description of the access points and haul-out routes for remedial activities; remediation methods and procedures; mitigation of dust; minimization or avoidance of disturbance to sensitive ecosystems; and verification soil sampling and analysis. Included in the discussion shall be information on disposal sites, transport and disposal methods, as well as recordkeeping methods for documenting remediation, regulatory compliance, and health and safety programs for on-site workers.				
MM 5.15-2: A Soil Management Plan for Transmission Line Construction. Prior to issuance of a grading permit, a soil management plan shall be submitted to the CUPA for review and approval. The plan shall include practices that are consistent with the California Title 8, Occupational Safety and Health Administration (Cal-OSHA) regulations, as well as CUPA remediation standards that are protective of the planned use. Appropriately trained construction personnel shall be present during site preparation, grading, and related earthwork activities (e.g., augering) to monitor soil conditions encountered. In order to confirm the absence or presence of hazardous substances associated with former land use, a sampling strategy may be implemented. The sampling strategy shall include procedures regarding logging/sampling and laboratory analyses. The Soil Management Plan shall outline guidelines for the following:	Submittal and approval of Soil Management Plan and Monitor soil conditions encountered	Prior to issuance of grading permit for the transmission line and During construction	Applicant/Construction Manager	LACFD (CUPA)

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• Identifying impacted soil • Assessing impacted soil • Soil excavation • Impacted soil storage • Verification sampling • Impacted soil characterization and disposal				
MM-5.15-3: The historic oil well that requires abandonment or re-abandonment shall be abandoned to current standards. Prior to issuance of a grading permit, an investigation into the location of the historic oil well, reportedly located on the proposed Project site shall be conducted. If the well is determined to be located on the Project site, the well shall be inspected. If the well was not abandoned properly, as determined by the California Division of Oil, Gas, and Geothermal Resources (DOGGR), the well shall be re-abandoned to the satisfaction of DOGGR. The Project development plans shall comply with the required setbacks from oil and gas wells as determined by DOGGR and the County of Los Angeles.	Investigation of historic oil well and If well is determined to be present on the Project site, obtain determination from DOGGR that historic well was properly abandoned or re-abandon the well to the satisfaction of DOGGR	Prior to issuance of grading permit	Applicant/Construction Manager	DOGGR
MM 5.15-4: Demolition Hazardous Building Materials Assessment and Management Plan. Prior to the commencement of any demolition activity on the Project site, the demolition Manager shall prepare a written Demolition Hazardous Building Materials Assessment and Management Program for review and approval by the CUPA, and/or other appropriate regulatory agency. The Demolition Hazardous Building Materials Management Program shall	Submittal and approval of Demolition Hazardous Building Materials Assessment and Management	Prior to commencement of any demolition activity	Applicant/Demolition Manager	LACFD (CUPA) AVAQMD

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
include an assessment for lead-based paint (LBP) and asbestos-containing material (ACM) as identified in the URS pre-demolition survey report (URS 2010), and the following plans shall be prepared: • Lead-based Paint Abatement and Management Plan. A LBP Abatement Plan shall be prepared and implemented by a qualified Manager. Elements of the plan shall include the following: ▪ Containment of all work areas to prohibit off-site migration of paint chip debris. ▪ Removal or encapsulation of all peeling and stratified LBP on building surfaces and on non-building surfaces to the degree necessary to properly complete demolition activities per the recommendations of the survey. The demolition Manager shall properly contain and dispose of intact LBP on all equipment to be cut and/or removed during demolition. ▪ Providing on-site air monitoring during all abatement activities and perimeter monitoring to ensure no contamination of work of adjacent areas. ▪ Cleanup and/or HEPA vacuum paint chips. ▪ Collection, segregation, and profiling waste for disposal determination. ▪ Post-demolition testing of soil to assure that soil at the site is not contaminated by LBP. ▪ Providing for appropriate disposal of all waste. • Asbestos-containing Materials Abatement and Management Plan. Prior to demolition work that shall disturb identified ACMs, an ACM Abatement and Management Plan shall be prepared.	Program and Notification of demolition activities to AVAQMD and Maintain log to demonstrate compliance			

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Asbestos abatement shall be conducted during demolition activities, consistent with OSHA and air quality regulations. The Management plan shall include detailed information regarding ACM classification, ACM hazard assessment (the possibility of fiber release from ACM is based on the materials condition, such as friability), ACM inventory information, training and qualification for workers, demolition handling procedures, waste management and disposal procedures, and emergency response procedures (in case of a release of friable materials) licensed asbestos abatement removal Manager shall remove the ACMs under the oversight of a California Certified Asbestos Consultant. All identified ACMs shall be removed and appropriately disposed of by a state-certified asbestos Manager. The proposed Project shall include notification of demolition activities to the Antelope Valley Air Quality Management District.				
LAND USE				
Mitigation Measure 5.16-1: Tree Planting Modification. Prior to issuance of a grading permit, the applicant shall obtain authorization to modify the tree planting requirements of the Green Building Ordinance from the Director of Public Works and shall comply with all considerations and other terms of the Green Building Ordinance requirements to the satisfaction of the Director of Public Works (see Sections 22.52.2130.C.5 and Section 22.52.2150 of the County Code).	Obtain authorization to modify the tree planting requirements of the Green Building Ordinance	Prior to issuance of grading permit	Applicant	LACDPW
NOISE				
MM 5.18-1: Pile Driver Orientation. In order to reduce the noise levels generated by the vibratory pile driver and comply with all	Maintain log demonstrating	During construction	Applicant/Construction Manager	LACDRP

MITIGATION MONITORING AND REPORTING PROGRAM
PROJECT NO. R2009-02239

Mitigation Measures	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
applicable Los Angeles County noise standards, the pile driver shall be oriented such that the rear of the pile driver faces toward the noise-sensitive receptors when the vibratory pile driver is being utilized within 3,000 feet of the receptors.	compliance and Site inspection			
MM 5.18-2: Construction Equipment Use of Mufflers. Construction equipment and vehicles shall be fitted with efficient and well-maintained mufflers to reduce noise emission levels. In addition, the Project construction equipment and vehicles shall be maintained according to the manufacturers' instructions and recommendations.	Maintain log demonstrating compliance	During construction	Applicant/Construction Manager	LACDRP
MITIGATION COMPLIANCE				
As a means of ensuring compliance of the above mitigation measures, the Applicant and/or subsequent owner(s) are responsible for submitting an annual mitigation compliance report to the LACDRP for review, and for replenishing the mitigation monitoring account if necessary until such time as all mitigation measures have been implemented and completed.	Submittal of annual mitigation compliance report and Replenishing mitigation monitoring account	Annually until such time as all mitigation measures have been implemented and completed	Project Applicant and Subsequent Owner(s)	LACDRP

[1] List of Acronyms:

ACM	Asbestos-containing material	Cal-OSHA	California Occupational Safety and Health Administration	CRHR	California Register of Historic Resources
AQCMM	Air quality construction mitigation manager	Caltrans	California Department of Transportation	CUPA	Certified Unified Program Agency
ATCM	Airborne toxic control measure	CARB	California Air Resources Board	DEIR	Draft Environmental Impact Report
AVAQMD	Antelope Valley Air Quality Management District	CBC	California Building Code	DOGGR	California Division of Oil, Gas, and Geothermal Resources
BLM	Bureau of Land Management	CCR	California Code of Regulations	DPR	Department of Parks and Recreation
Cal-IPC	California Invasive Plant Council	CDFG	California Department of Fish and Game	EIR	Environmental Impact Report
		CEQA	California Environmental Quality Act		